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ON SCAPULO-HUMERAL DISLOCATION IN THE HORSE.

BY P. S. ABRAHAM, M.A., B.Sc., F.R.C.S.I., MEMBER OF THE COURT OF EXAMINERS, AND CURATOR OF THE MUSEUM, OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

DISLOCATIONS of the shoulder appear to be amongst the most rare accidents to which the horse is liable. The majority of writers on veterinary surgery either do not allude to such a lesion, or, if they do, they dismiss it in a few words as an almost impossible occurrence. Such a high authority as Youatt, speaking of the humerus of the horse, says, "Dislocation can scarcely occur in either of the attachments of the bone;" and an older author, Blaine, maintains that the idea of dislocation at the shoulder in the horse being possible, "is founded on an ignorance of the anatomy of the animal." From the absence of a clavicle, the whole shoulder girdle is so movable, the articular surfaces of the humerus especially are so large, and the two bones are so strongly bound together by a mass of great tendons and muscles—notably by the huge tendon of origin of the flexor brachii, which works in two large and deep grooves in front of the head of the humerus—that it really is difficult to understand, *à priori*, how a scapulo-humeral luxation can take place. Professor Williams, in his work on "Veterinary Surgery," relates a case, witnessed by him when a youth, which he thinks must

have been a dislocation of the shoulder :—"A horse slipped and fell; when he arose, one fore-leg was found powerless, pendulous, shorter than its fellow, and bulging outwards at the shoulder-joint. He was taken to a stable, where he immediately lay down, groaned in agony, was very restless, and unable to rise to his feet. A practitioner, who was sent for, pronounced the shoulder to be out; he secured the animal's other legs by means of hobbles, applied ropes to the lame limb above the knee and at the pastern, and had several men to pull steadily at the ropes to cause extension. When all was ready he slipped his boots off, and suddenly jumped with force on the damaged joint, which immediately gave a kind of crack, and the bulging suddenly disappeared. The ropes and hobbles were now removed, the horse assisted to his feet, when he was found to be nearly well, and walked home a distance of about three miles that night." An acquaintance has recently informed me that a similar accident happened to a horse of his in the hunting-field some years ago. The animal breasted a fence; when raised, he stood on three legs, and a hard lump bulged out at the shoulder. The injured leg was firmly held down, the horse reared up, and in the act he states that "the joint came right with a click."

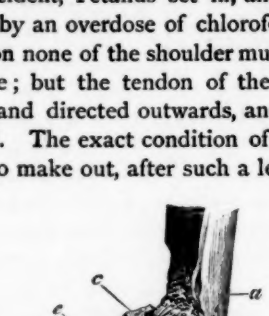
Finding the literature of the subject so scanty, and as I could hear of no specimen at all similar to the one I am able to exhibit to-night to the Pathological Section of the Academy, I wrote to the Royal Veterinary College in London, and to the Editor of the VETERINARY JOURNAL, the pages of which I had searched in vain. Professor Robertson, Principal of the College, and Mr. George Fleming, F.R.C.V.S., the eminent President of the Royal College of Veterinary Surgeons, and Editor of the JOURNAL, kindly answered my inquiries; and both gentlemen remark in their letters upon the extreme rarity of the accident. In more than thirty years Professor Robertson has "only met with two instances, and both were displacements of the head of the humerus backwards and outwards." He states that there is no specimen in the Museum of the Royal Veterinary College. Mr. Fleming refers to the case mentioned by Professor Williams, quoted above, and he informs me that a still more detailed

description is to be found in Stockfleth's "Handbuch der Thierarztlichen Chirurgie."*

The accident, in my case, happened thus:—The horse, a very spirited animal, took a fence intemperately, near the finish of a long run with the "Ward Union" hounds. The jump was a little short, and he fell across the crest of a narrow bank at the far side of the dyke with his off fore-leg bent under him, and inwards. He wriggled over into the field beyond, and lay on his side for about a quarter of an hour. When got to stand up, a marked deformity at the shoulder was at once apparent—a large hard protuberance, which seemed to lie forwards and outwards from the lower end of the scapula. From the prominence upwards the contour of the shoulder was rather concave. There was but little apparent shortening of the limb, very slight turning in of the toe, and the animal seemed able to rest some weight upon the leg. In consequence of this latter fact, the general opinion of the horsemen who happened to be on the spot was that the shoulder was not "out." However, I made a feeble attempt at extension, but without the least effect. The horse was then led to the nearest station, the distance being nearly three and a half miles. Now that we know what really happened, it is extraordinary that the poor horse could have moved along. He was, of course, fearfully lame, but beyond an occasional stumble against a stone with the bad leg, he got over the distance without mishap in an hour and a half. He was then brought up to Dublin by train, and taken to the nearest veterinary surgeon, who considered that one of the shoulder muscles had been ruptured. The treatment adopted was an immediate blister. There seemed to be a general agreement of opinion on the part of the profession that no dislocation existed, and that any attempt at reduction would be ridiculous. After a time a leather shield was tightly strapped over the prominence by another practitioner, who also felt confident of the horse's ultimate recovery. Naturally, however, the shoulder, by degrees, became more stiff—progression soon being solely on three legs; the shortening of

* This dislocation has been observed in horses, cattle, and dogs, and it, as well as its treatment, is described in my "Text-book of Operative Veterinary Surgery," Part I., page 155.—G. FLEMING.

the leg became more marked, and the toe turned more inwards. The wasting of the muscles of the shoulder was now extreme; and a sore was observed on the withers—no doubt caused by the tight strap which held on the leather shield. Finally, ten weeks after the accident, Tetanus set in, and the poor animal was put an end to by an overdose of chloroform. At the *post-mortem* examination none of the shoulder muscles presented any evidence of rupture; but the tendon of the flexor brachii was tightly stretched, and directed outwards, and the capsular ligament was ruptured. The exact condition of the soft parts was, however, difficult to make out, after such a length of time from



Shoulder-joint seen from the front, from a photograph of the bones after maceration :—*a.* Neck of scapula; *b.* Glenoid cavity of scapula; *c.* External edge of glenoid cavity broken off and pushed up; *d.* Coracoid process; *e.* Head of humerus; *f.* Great trochanter of humerus.

the date of the injury, and in consequence of the large amount of callous and inflammatory tissue in the neighbourhood. The scapula and humerus were firmly united together, and not the slightest movement could be effected between them. With considerable force they were broken apart, and the rough surfaces of contact now show that considerable bony ankylosis had set up between the bones in their new position. The humerus is seen to be dislocated on the dorsum of the scapula—*i.e.*, the head of the bone has been forced outwards and upwards,

its level being nearly three inches above the level of the glenoid cavity of the scapula. Rather more than an inch of the outer edge of the glenoid cavity has been broken off and pushed up, and is now to be seen ankylosed on the neck of the scapula in the line of the spine. The scapula and humerus were fixed at an angle corresponding to a position of the limb between extension and flexion. The actual condition of affairs is well seen in the accompanying engraving, which is from a photograph (kindly taken by my friend Dr. R. A. Hayes) of the bones in their new position—the view being a front one. The bony prominence—which, as I mentioned above, could be seen and felt at the time of the accident—lying apparently in front of the joint, was caused by the anterior projection of the great trochanter, which is situated on the outer side of the bicipital groove. This gave the appearance of a dislocation of the humerus forwards, and I erroneously imagined that the head had probably lodged beneath the coracoid protuberance of the scapula. Such an occurrence could scarcely, however, take place in consequence of the immense development of the bicipital tendon.

There can be little doubt that reduction would have been quite possible in this case. Of course considerable traction would have been necessary, but the horse should have been anæsthetised, and the only difficulty would have been in fixing the scapula. On the other hand, it is not likely that a completely successful result would have followed; for, as we see, the glenoid edge was fractured, and the probability is that a stiff joint would have resulted.

THE RELATIVE VALUE OF SUBJECTS TAUGHT THE VETERINARY STUDENT.

BY THOMAS GREAVES, F.R.C.V.S., MANCHESTER.

(*Continued from page* 315.)

In continuing the consideration of this subject, I wish it to be clearly and distinctly understood that, in judging the capacity of a student, a due and reasonable regard must always be made for his age. It would be unfair to expect him to possess that clear

and prompt decision—that wisdom—that quality of acuteness of perception—which is only acquired by long intelligent observation and experience. The degree of knowledge the student, at twenty-one years of age, is reasonably expected to possess on all subjects appertaining to his profession should be readily and plainly demonstrable to the examiner. It is true the students are unequal in intelligence and in moral purpose, and, unless a student has some written evidence to show that he has ever been engaged amongst sick and lame horses, the examiner has no guarantee that such student knows anything whatever of general practice, except by *seeing him do the work itself.* What chance, I would ask, have the examiners of satisfying themselves of the student's practical qualifications on the day of examination? There are scores of operations that it would be utterly impossible for the student to perform before the examiners in the brief space of time allotted them; yet the *examiner is obliged to vouch for them.* The student may never have castrated a colt, or seen it done; may never have unnerved a horse, or seen it done; may never have attended a case of parturition, or seen it done; may, in fact, never have seen a sick or lame horse as a patient in his life, only the few cases he may happen to have seen at college—yet the examiner must certify that such student is fully competent to perform these and every other operation required in our profession. Much has to be inferred; the examiner has to assume (without proof) that he knows it whether he knows it or not. Is not this, I would ask, a farce—a veritable farce—on the very face of it? We are told that all the theoretical subjects must, of necessity, be taught and acquired, whether the practical be taught or not, because they are of first importance, and it is the only chance the student has in his life to acquire and perfect himself in them. The subjects are botany, materia medica, chemistry, anatomy, physiology, histology, morbid anatomy, horse and cattle pathology; but it is contended that the practical knowledge is not of such paramount importance, as it may be obtained or learned after the student has left college—that he will become more and more proficient in this department of his studies as years roll on. He must, forsooth, gain this experience at the expense

and loss of his employers; as Mr. Moore and the late Mr. John Lawson often used to say, "Such a one will have to fill a ten-acre field with *his victims*, in acquiring the experience he ought to possess before he obtained his diploma." *The above opinions are in direct opposition to the opinion often expressed by Coleman, Dick, Spooner, and Wilkinson.* But what are the objections, let me ask, to the pupilage? I have put the question to several professors; *they one and all give me the same answer.* They say the youth who has been trained in the work of his profession, who has become familiar in diagnosing and in the treatment of all kinds of sick and lame cases in general practice, before going to college, is always A CONCEITED MAN. This is the great fault —the heinous, insuperable objection to pupilage. Conceited, forsooth! This conceit has to be taken out of him; it has all to be unlearned; the knowledge that has been so carefully, so diligently, so sacredly implanted in his mind is worse—much worse—than useless. They say it always makes him the worst of students; it matters little or nothing who or what the general practitioner may be who has inculcated the ideas; it may be he is a person of education, of mature age and experience; or it may be he has only lately emerged from one of those scientific institutions, and possesses all the modern ideas and the profound knowledge of the present day equal to the professor himself. It is all the same; these ideas acquired in actual practice must be ruthlessly expunged, and none have place in the student's mind but those precious ideas specially instilled by the learned professor himself. They would have us believe that the mind of the student must be fed by no mental food except that prepared for him by professors, on pain of being poisoned. Is this, I would ask, a tangible proposition? Does it not contain elements of dictation and superciliousness? I would here ask is it because such student can, when asked, tell the lame leg correctly, can diagnose pretty acccurately the disease a patient is labouring under, that this is construed into conceit? But, on the other hand, the student whose mind is utterly innocent of all knowledge of horses is never considered a conceited man; he can attend college with clean hands, in lavender kid-gloves, silver-mounted cane, white cambric hand-

and prompt decision—that wisdom—that quality of acuteness of perception—which is only acquired by long intelligent observation and experience. The degree of knowledge the student, at twenty-one years of age, is reasonably expected to possess on all subjects appertaining to his profession should be readily and plainly demonstrable to the examiner. It is true the students are unequal in intelligence and in moral purpose, and, unless a student has some written evidence to show that he has ever been engaged amongst sick and lame horses, the examiner has no guarantee that such student knows anything whatever of general practice, except by *seeing him do the work itself.* What chance, I would ask, have the examiners of satisfying themselves of the student's practical qualifications on the day of examination? There are scores of operations that it would be utterly impossible for the student to perform before the examiners in the brief space of time allotted them; yet the *examiner is obliged to vouch for them.* The student may never have castrated a colt, or seen it done; may never have unnerved a horse, or seen it done; may never have attended a case of parturition, or seen it done; may, in fact, never have seen a sick or lame horse as a patient in his life, only the few cases he may happen to have seen at college—yet the examiner must certify that such student is fully competent to perform these and every other operation required in our profession. Much has to be inferred; the examiner has to assume (without proof) that he knows it whether he knows it or not. Is not this, I would ask, a farce—a veritable farce—on the very face of it? We are told that all the theoretical subjects must, of necessity, be taught and acquired, whether the practical be taught or not, because they are of first importance, and it is the only chance the student has in his life to acquire and perfect himself in them. The subjects are botany, materia medica, chemistry, anatomy, physiology, histology, morbid anatomy, horse and cattle pathology; but it is contended that the practical knowledge is not of such paramount importance, as it may be obtained or learned after the student has left college—that he will become more and more proficient in this department of his studies as years roll on. He must, forsooth, gain this experience at the expense

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kerchief, scented with a sweet perfume that permeates all the locality—yea, he may also have a fox's tooth in his hat, and a horse-shoe pin in his scarf, but he is never conceited. Oh, no; it is only the practical student that is conceited. For the life of me, I can see no tangible reason—there is really no earthly reason whatever why the practical student should be conceited more than any other student, or be supposed to be from some family of a lower stratum of society, or from a more vulgar or less cultured class than he who knows nothing of horse knowledge.

The Students.

The professors say: "Let all students come up to college perfectly free from all preconceived notions about horses; let them be in complete innocence and ignorance of veterinary practice." They say, in effect, "Let me have a clean bill of fare, then I can mould him into what he ought to be." An inordinate fondness for veneering prevails; some prefer polish to solid acquirements. Well, now, let us for a moment look carefully, fairly, and dispassionately at this question. Let us take two students, just as they are stepping over the threshold into the college. They shall be about twenty or twenty-one years of age each, of about equal education and capacity to learn: the one has served a pupilage of two or three years in a bustling general practice under an intelligent and smart practitioner—been engaged all the while from morning until night daily amongst sick and lame horses, cattle, etc.; the other's mind has not been contaminated by having seen, read, or heard of sick or lame horses or cattle, etc. We ask the former one, "Let me see you give that horse a ball and a drink;" he does it at once, without bustle or trouble. He is then asked to insert a seton in throat, and also one in the frog—he does it at once, without bustle or trouble. He is asked to clip, fire, and blister a horse's legs, then put on hobbles and cast a horse; he does it at once, without bustle or trouble. He is asked to take up a cow's fore-foot and a hind-foot, and to put a sheep upon its back; he does it at once, without bustle or trouble. He is asked to diagnose a case of lameness and also a case of sickness; he does it at once, without bustle or trouble. In doing these things he puts himself in

proper form, goes about his work with ease, and is handy in his work; he puts himself and his horse in ship-shape, so to speak; all who see him see that he is accustomed to the work and knows what he is doing. We now come to the other student. We ask him to do these several things. Of course, he knows nothing whatever about them; he is as innocent and as ignorant in these matters as a child; he has all this to learn—if it is worth learning—whereas the other has already learned it; he has learned it whilst his mind and his nature are most impressionable. "We look upon this picture and then on that," and ask ourselves which of the two seems best fitted to become the most useful man? They then enter upon the scientific study of the laws that govern disease.

We now take our leave of these students for three-and-a-half years. They mingle in the classes. They study and learn botany, materia medica, chemistry, anatomy, physiology, histology, morbid anatomy, horse and cattle pathology. Before parting, we strongly advise both students that it should be the aim of all young men to go into good society—the society of the wise, the intelligent, and the good. When you find men who know more than you do, and from whose conversation you can gather information, it is always safe to associate with them. To elevate the character—to improve the life—there must be strength of will, power of self-denial, persevering effort. It is the habitual thought that frames itself into our lives; it affects us more than our immediate social relations do; our confidential friends have not so much to do in shaping our lives as thoughts which we have harboured. In observing the ways of good business men, whether they be students or veterinary surgeons, you will always find that each man makes his special business his life's work, and studies it thoroughly, sticks close to it through good times and bad times; economy in every way is strictly enforced; no work or means of any kind is wasted; no opportunity missed; no want of strict business method.

The student or veterinary surgeon must possess a kindly, pleasant, agreeable manner and demeanour, so as to make friends, and become respected; his conversation must be marked by a thoughtful intelligence, be interesting and instructive; his

observations about horses, or on diseases, or about his patient in particular, must be terse, and possess common sense, indicating the possession of a superior knowledge and a cultivated mind. Make all your remarks well to the point, concise, and suitable to the occasion; the importance of this instruction is only felt and taught in the business of the profession.

We now meet our two students again after three-and-a-half years' interval. We ascertain that they have been average students; have been steady, and attentive to lectures, etc. The one has applied himself diligently, and especially to all subjects except pathology; that subject to him has been of secondary importance, since he had seen practice before entering college, and he could bestow the whole of his time and his mind more usefully to the study of the other subjects, and thus learn them more thoroughly. The other student, although equally diligent, has had to devote much of his time and attention to obtaining some idea of pathology as taught at college, which, by-the-bye, is a very different thing altogether to that adopted and necessary in general practice, in which he has hereafter to get his living. We now put them again through the same ordeal we did when they entered college; they have now obtained their diplomas, and are both medallists (I may say, in parenthesis, that the higher order of practical student always shows a superiority over the non-practical student, not only in his being a more successful practitioner in after life, but also in carrying away the majority of prizes at college). We find the two students—the one is quite as forward in his knowledge as the other in every scientific subject, none of which subjects seems to be of the same value or importance as tact and business habit. The one with only college ideas of practice, finds, when left to himself in practice, to be contending with many disadvantages, and quite at sea. However well he may have mastered the various other subjects—however scientific he may be—he cannot yet diagnose a case of lameness correctly, and cannot cast a horse for the life of him. (This statement is vouched for by the late John Wilkinson, Mr. James Collins, and many others.) He is sure to feel a want of confidence in himself. He is for many years tormented with conflicting, scientific, and mystifying appre-

hensions, which only time, close observation, and a tenacious resolve can in part, but which will never entirely, remove.

(To be continued.)

A NEW FORM OF SUTURE FOR APPROXIMATING THE EDGES OF WOUNDS. (PATENTED NO. 13196.)

INVENTED BY MR. J. MACMUNN.

I BEG to submit to the notice of the profession a form of suture which, in my opinion, would be useful, and might, in certain cases and in certain situations, supersede with advantage the ordinary means of approximating the edges of wounds. I am not aware that such a contrivance has been used before, although the age of the thread suture, and the absence of recent attempts to modify its principles of fixation, would seem to indicate that it has reached the stage when modification is unnecessary and impossible. Nevertheless, the suture is objectionable in ways which will immediately suggest themselves to anyone who reflects for an instant on its application. It fails to approximate the walls of a wound in a desirable manner; only too often bringing into contact the limited superficial portions of the tissues corresponding to where the threads are inserted, and leaving the deep parts unapproximated. There is a circular constriction, which frequently leads to ulceration and strangu-

lation of the tissues enclosed within it, and thus to uselessness of the suture; while this defect is not at all times caused by a too-tight application, but is indirectly owing to the smallness of the body which bears the strain of the tissues. The suture acts as a foreign body in the wound, and causes those conditions which are known to prevent early union. These not being imaginary objections, but based on experience, I wish to suggest the following form of suture as fulfilling indications not met by the ordinary interrupted suture, and being at the same time easy

of application. These sutures may be very readily introduced by a torsion forcep, which is made to grasp the V-shaped bend while the fingers of the left hand approximate the edges of the wound; after which, if the wound is not thoroughly closed, the wire may be clamped at the bend, and the points brought closer together, with or without being held by a thread or a piece of cork fastened on them. A piece of folded lint may then be applied under the bend to afford support to the wound. The sutures may be introduced either in the long axis of the wound, which is preferable, or across it, when a foreign body would, of course, be present. These sutures may be had of various thicknesses, sizes, and curves, hardened lancet-shaped points, manufactured by Messrs. Arnold, of Smithfield.

SKIN DISEASE DUE TO A NEMATODE WORM.

BY GEORGE FLEMING, LL.D., F.R.C.V.S.

THE interesting paper from the pen of Mr. W. D. Gunn, Army Veterinary Department, on "The Pathology of Skin Disease prevalent among Troop Horses in India," and which appeared in the last number of this journal, deserves particular notice from the fact of its containing the discovery of a nematode worm, which appears to have been the cause of annual attacks of a cutaneous disorder. The discovery of a worm of this order in this situation is only so far a novelty in that it has been noted in India; inasmuch as in 1868, Professor Rivolta published in *Il Medico Veterinario* a description of a minute worm which he had found in the skin, producing great irritation and an eruption, and which he named *Dermofilaria Irritans*. And in the April number of the *Revue Vétérinaire* (page 166) Professor Laulanié, of the Toulouse Veterinary School, evidently not aware of Rivolta's discovery, has a paper on "The Parasitic Nature of Granular Dermatitis," which is evidently the same disease as that alluded to by Rivolta as caused by a filaria, which disease had been named by Professor Bouley *Dermite Granuleuse*. The malady had long been popularly known in France by veterinarians and others by the name of "Summer wounds" (*plaies d'été*),

and in Germany as ***Knötchen-Ausschlag des Pferdes, Sommer-räude, Hitz Knötchenausschlag.*** Laulanié's discovery appears to have been accidental, as his investigation into the nature of the skin disease had no other object than the exact determination of lesions of the derm, and the nature of the granulations which more particularly distinguish this morbid condition. The fundamental anatomo-pathological character of the malady is due to the presence of a large number of granulations, in different stages of development, disseminated throughout the substance of the derm. These granulations, examined by the naked eye, appear to be composed of a small irregular mass of a caseous nature and consistency, which is readily enucleated ; practising in making sections and fragments of skin previously hardened, the granulations are variously exposed at different parts of their substance, where they can be examined throughout. This is the only kind of examination which Laulanié could avail himself of, as he was unable to find a re-agent capable of dissolving the caseous or calcareous substance of which the granulations are composed. The caseous masses on section were in the form of yellowish, and circular, elliptical, or irregular pieces, surrounded by a zone of connective tissue, the elements of which were more or less altered by the casefication, with a fibrous outline. In the centre of each piece was observed a section of one or more fragments of a nematode worm, whose integument presented the characteristic streaks or stripes. The various aspects which the fragments offered proved that the worm had been curved in an irregular spiral manner. It sometimes happened that no traces of the worm were found in some of the caseous masses, but in the place which it should have occupied there was an irregular cavity with a notched outline, or organic *débris*, very evidently the remains of a nematode worm which had been dead for some time.

The secondary lesions of the skin were merely the expression of an inflammatory process, the intensity of which appeared to depend upon the period of the year when the diseased skin was examined. In one of his first observations, made in winter on fragments of skin removed from a horse affected with Granular Dermatitis without sores, Laulanié found the characteristic

granulations, with the worm in the centre. The skin was very much thickened, and, as it were, sclerosed. In some points there were remarked transverse sections of small arteries in process of obliteration and fibrous transformation, the lumen of the vessels only offering a very fine star-shaped outline.

His second observations, made on the skin of a troop horse, showed alterations manifestly of a sub-acute character.

The derm was infiltrated with embryonic, and especially fibroplastic, elements, which were abundantly interposed in the connective and fibrous fasciculi. The small vessels—very numerous —were often filled with leucocytes, particularly those vessels passing to the granulations of the sore. There were also, as in the preceding observation, small arteries undergoing obliteration.

From his investigations, Laulanié arrived at the following conclusions :—

1. Granular Dermatitis is caused by a nematode worm.

2. The parasite occupies the centre of a cheesy mass, surrounded by a fibrous capsule.

3. It persists for years in the granulations to which it gives rise, and thus becomes a permanent cause of irritation of the skin.

The latter conclusion was arrived at from the nature of the process of casefication, which implied a very long period.

It may thus be inferred that Granular Dermatitis is a continuous affection, the duration of which is only limited by the death of the parasite which causes it, and the periodical acute manifestations of which are incidents determined by elevation of temperature. Clinical experience lends its support to these pathological observations, inasmuch as the disease persists during the warmest weather, no matter how energetic the medical treatment may be ; while it invariably recurs in horses which have once been attacked with it. In a word, it is a periodical disease, and most difficult to cure. Its periodicity is explained very clearly by the nature of the morbid cause rendered evident by histology. The presence of the worms does not cause any disturbance during winter, but in summer, owing to the natural congestion of the tissues which results from increased tempera-

ture, the parasitic granulations situated in the centre of the tissue become more irritable, and there develop the first signs of sub-acute inflammation, accompanied by pruritis, which causes the animal to rub and gnaw itself. Hence the excoriations and the sores, which are all the more persistent as the exposed derm becomes more impressionable, and more sensible to the irritating effect of the granulations.

When the temperature diminishes, the congestion of the skin decreases, the pruritis lessens, the sores become cicatrised, and the new-formed tissue undergoes fibrous transformation.

With regard to the inefficacy of the treatment hitherto employed, this is readily explained by the histological characters of the parasitic granulation. The nematode occupies the centre of a caseous mass, very thick and dense, when compared with the size of the worm, and impermeable to therapeutic agents.

Laulanié believes that before the worm localises itself in the skin it circulates in the blood, to which it gains access by some unknown means; the vascular alterations observed in his specimens leading to this supposition.

In order to prevent the disease, we must know the source whence the nematode is derived; and in order to cure it, the worm must be attacked either during its resting stage in the skin, or some agent must be employed during its active period in summer, sufficiently powerful to dissolve or destroy the fibrous and caseous envelope which protects it at that period.

Editorial.

THE PRACTICAL EDUCATION OF STUDENTS AND VETERINARY SURGEONS.

Our last article on Practical Education has attracted so much notice, that we make no apology for continuing our remarks on the subject. We briefly offer to our readers some further important considerations, in the hope that efforts will be made on all sides to bring about a much needed and permanent improvement. It will, we venture to think, be generally allowed that the shortcomings detailed in our former number refer only to the groundwork of the student's education, and that the points noticed may be truly described as belonging to the very rudiments of professional teaching. It is, perhaps, not as widely known as is desirable that within the last two years the rejections of candidates for the Army Veterinary Department have been mainly due to their deficiency in practical and manipulative skill, the number who failed being about fifty per cent. This army examination cannot by any means be called severe, as the candidates are not taken on any uncommon operations—in fact, they are only tested in the usual and ordinary ones. It may, however, be described as a more searching trial than the practical examination for the diploma, as it lasts about three hours, and plenty of horses are provided for inspection. All the usual operative instruments are also laid out, so that the candidate may practically illustrate their use one after the other. He has to examine horses for age and soundness, and to write certificates, and also prescriptions. He is also shown cases of disease, and tried in his powers of diagnosis and treatment. All these tests may be said to constitute a true practical examination, yet no one will describe it as severe; and we have no doubt that, with the march of progress, our examination for the diploma will be conducted on similar lines. We may further state, for general information, that the practical examination of army candidates occupies one day; another day is devoted to the written examination, so as to ascertain whether the candidate possesses a fair scientific acquaintance with his profession; and from the style of the written answers a good idea may be obtained of the general knowledge and education of the aspirant. In this written examination there are always some questions on Cattle Pathology, which is of great importance to army veterinary surgeons in India and other parts of our foreign dominions. No question, however, is asked that a young veterinary surgeon cannot reasonably be expected to know, and ample time is afforded, so that the papers may not be written with disadvantageous haste. In future, in the army examinations, it is probable that more attention than has yet been the case will be given to what we may call practical anatomy. If a veterinary surgeon does not know the situation of the different parts and organs of his patient, it is found that he is afraid to perform even simple operations; and he keeps animals for a long time from their work, in the hope that he may, by some fortunate chance, be spared the use of the operating knife which he so much dreads to employ. This is very often seen, and shows that a diligent study of practical anatomy should be enforced on the student, and that the final examination should be proportionately severe. No one

who has experience of many veterinary surgeons can fail to see how frequently horses, and other patients too, are kept for a long time from usefulness, and often lost, through the fear of the practitioner to perform what is, in very many cases, a simple operation. We have frequently observed that ignorance of the parts to be operated upon is almost always the cause of this deplorable failure of duty. May we not say that no student should be allowed to shirk practical dissection and anatomy? If he does, he cannot become an efficient or trustworthy practitioner. We might almost go so far as to say that an empty dissecting-room is a great anomaly during any part of a session, and the amount of dissection is a fair indication of the value of the whole curriculum of study. We may well ask why so many young veterinary surgeons are unable to tell in which leg a horse is lame? For the great majority the answer is not far to seek. It is want of practice. In our college-time it was the almost daily custom for two or three students to go along the streets in company, and notice the lame horses trotting by—numerous enough in all large towns—and compare opinions as to which was the affected limb. We commend this plan to earnest and industrious students as being time exceedingly well spent. Surely young veterinary surgeons should know something about the quality of hay, oats, and other foods given to their patients; and they should be able, in any given specimen of hay, to pick out the good and bad feeding grasses. This is easily and quickly learnt. This knowledge is very essential in the army, and quite as much so to the civilian veterinary practitioner. In order to acquire it, practice is again required, but how easy to obtain it will occur to everyone. The question will doubtless be asked: But how is it that with all these deficiencies examiners have passed candidates as qualified to receive a diploma? The answer to this is that examiners cannot go beyond the general knowledge of the pupils, or the rejections would be overwhelming. They have to do the best they can with those who present themselves for examination. The examiners will, we feel sure, be only too glad to find that candidates know the rudiments and groundwork of their profession. What is found to occur in the examination of candidates for the army—that fifty per cent. fail from want of practical and manipulative skill—shows us that it is useless to expect success in students who are deficient in the rudiments of their profession. There must be something to be amended in the method of teaching when the very foundation is wanting. In concluding for the present our remarks, we may truly say that what we have described has for a long time been discussed in the profession, and the only wonder is that so many deficiencies have not long ago been removed. We confidently submit to all veterinary associations and well-wishers of the profession that reform is urgently required, and that all should co-operate to abolish what at this time of day amounts to a grave scandal. We feel equally confident that the energetic principals and teachers of our colleges will devise means to ensure that their pupils shall no longer escape learning the practical rudiments of their profession. We hope soon to see a rivalry in practical instruction established, for of all branches of teaching it is the one least to be dispensed with in the successful education of the veterinary surgeon.

THE PENNSYLVANIA UNIVERSITY.

IT gives us very much pleasure to announce that Dr. Osler, of the McGill University and the Veterinary College, Montreal, whose name will be familiar to the readers of this journal, has been elected to the chair of Clinical Medicine in the above university at Philadelphia. He is about to visit this country in order to deliver the Gulstoninian lectures at the Royal College of Physicians of London. We may also notice that a Veterinary College has been established in connection with the Philadelphia University, and that the selected principal is Dr. Huidekoper, a graduate of the New York Veterinary College, who has also studied at several of the German and French veterinary schools, and rendered himself in every way competent for teaching the science and practice of veterinary medicine in its highest and latest development. We anticipate excellent results from the institution of this college, under the able and enlightened directorship of its principal. We have received the following account of the veterinary department of the Pennsylvania University from an esteemed correspondent there:—

"On the 2nd of October the new veterinary faculty of this university was formally opened with an introductory address by Dr. Huidekoper, the dean. Owing to the liberality of several of the citizens of Philadelphia, suitable buildings have been erected, and laboratories fitted for junior work. The plan is to begin this session with a first-year class only, and next year have stables etc., arranged for advanced work. As they stand, the buildings are the best on the continent, and afford admirable facilities for laboratory work. There is a lecture-room, capable of holding 200, a spacious dissecting-room with ten tables, a forge with ten anvils and all appliances for practical shoeing, and histological and pharmacological laboratories. The students take their practical chemistry and the general chemical lectures in the medical school. An excellent beginning will in this way be made. Twenty-four students have already entered, and we predict for the school a splendid career of usefulness. It is proposed next summer, when the infirmary is built, to start a school of farriery, where men can be practically trained and receive a certificate as expert shoers. The course in the veterinary school extends over three sessions of nine months each."

HORSE-POX.

DR. BLACHEZ recently brought to the notice of the Academy of Medicine, an epidemic of Horse-pox which lately took place at the Hospice des Enfants-Assistés. The malady was first observed in the nursery into which none but syphilitic infants, or those suspected to be such, are received. One of the infants had an ulcer on the lower lip, with enlargement of the neighbouring glands, and the ass that suckled it had a deep excoriation on the teat, which was noticed two days before the ulcer in the child. The animal so infected had for fifteen days suckled another infant that had an ulcer on the tongue, which naturally gave rise to suspicions of Syphilis.

The epidemic went on extending, when MM. Fournier and Bouley were consulted as to the nature of the prevalent malady. M. Fournier was doubtful as to its nature, but M. Bouley, the well-known veterinarian, at once pronounced it to be Horse-pox, the origin of which had to be sought for. It was noticed that another infant, who had been admitted twelve days previously, had both its arms covered with vaccine pustules, which were dressed by the "infirmier," who, having his fingers thus affected, inoculated the teats of the suckling asses. Other asses were also similarly affected, which was sufficient to account for the origin of this strange epidemic among the infants.

XUM

"EL DOURINE."

THE very fatal contagious sexual disease of solipeds known to the Arabs as "El Dourine," to the Germans as the "Beschalseuche," and to the French as the "Maladie du Coit," appears to have been on the increase lately in Algeria. To such an extent has it prevailed in Constantine, and so serious have been its ravages, that the Préfet of that Department has issued a decree setting forth that, during the season, mares and stallions—equine and asinine—are not to be brought together until they have been inspected by a veterinary surgeon, who will certify that they are healthy and likely to produce healthy stock, which certificate will be legalised by municipal authority.

CATTLE PLAGUE IN EGYPT.

IT is a matter for regret and anxiety that Cattle Plague is reported to have appeared among the cattle collected for the use of the British troops in the Soudan, as it may cause not only heavy pecuniary loss, but prove a source of embarrassment to the Commissariat. The scourge is never absent from the Delta of the Nile, and it has also been several times imported from Southern Russia. During our military operations three years ago in Lower Egypt, the disease was brought there by Russian cattle from Odessa (as it now has been), and but for its prompt recognition and suppression by the veterinary officers of the army, it would have done serious damage. We hope that they may be equally suc- cessful in combating the present outbreak.

PRZEVALSKY'S WILD HORSE.

GREAT interest is attached, says *Nature*, to the question of the origin of our domestic animals, and especially to that of the horse—which is generally supposed not now to exist in an aboriginally wild state. Every fact bearing upon this subject is of importance, and the discovery by the great Russian traveller, Przevalsky, of a new wild horse, more nearly allied to the domestic horse than any previously known species, is certainly well worthy of attention.

The horses which constitute the genera *Equus* of Linnæus, and are the sole recent representatives of the family *Equidæ*, fall naturally into two sub-genera, as was first shown by Gray in 1825 (*Zool. Journ.*, i., p. 241)—*Equus* and *Asinus*.

The typical horses (*Equus*) are distinguishable from the asses (*Asinus*) by the presence of warts upon the hind-legs as well as upon the fore-legs, by their broad, rounded hoofs, and by their tails beginning to throw off long hairs from the base, instead of having these hairs confined, as a sort of pencil, to the extremity of the tail. Up to a recent period all the wild species of *Equus* known to science were referable to the second of these sections—that is, to the sub-genus *Asinus*, known from *Equus* by the absence of warts or callosities on the hind-legs, by the contracted hoofs, and by the long hairs of the tail being restricted to the extremity of that organ. Of this group the best known species, commonly called wild asses and zebras, are (1) the wild ass of upper Nubia (*Equus tæniopus*), probably the origin of the domestic ass; (2) the wild ass of Persia and Kutch (*E. onager*); (3) the hemippe or wild ass of the Syrian Desert (*E. hemippus*); (4) the kiang or wild ass of Tibet (*E. hemionus*); (5) the quagga (*E. quagga*) of South Africa; (6) the Burchell's zebra (*E.*

Burchelli) of Southern and Eastern Africa; (7) the zebra (*E. zebra*) of Southern Africa. As already stated, these seven animals all possess the characters of the second sub-genus *Asinus* as above given, and no recent species of horse referable to the first sub-genus (*Equus*) was hitherto known to exist on the earth's surface, except the descendants of such as had been formerly in captivity.

Under the circumstances great interest was manifested when it was known that Przevalsky, on his return from his third great journey into Central Asia, had brought back with him to St. Petersburg an example of a species of wild horse which belonged, in some of its characters at least, to true *Equus*.

This new animal was described in 1881 in a Russian journal by Mr. J. S. Poliatow, and dedicated to its discoverer as *Equus Przevalskii*.

The recently-issued German translation of Przevalsky's third journey enables us to give further particulars of this interesting discovery.

Przevalsky's wild horse has warts on its hind-legs as well as on its fore-legs, and has broad hoofs like the true horse. But the long hairs of the tail, instead of commencing at the base, do not begin until about halfway down the tail. In this respect *Equus Przevalskii* is intermediate between the true horse and the asses. It also differs from typical *Equus* in having no forelock—that is, no bunch of hairs in front of the mane falling down over the forehead. Nor has Przevalsky's horse any dorsal stripe, which, although by no means universal, is often found in the typical horses, and is almost always present in the asses. Its whole general colour is of a whitish grey, paler and whiter beneath, and reddish on the head. The legs are reddish to the knees, and thence blackish down to the hoofs. It is of small stature, but the legs are very thick and strong, and the head is large and heavy. The ears are smaller than those of the asses.

Przevalsky's wild horse inhabits the great Dsungarian Desert between the Altai and Tianschan Mountains, where it is called by the Tartars "Kertag," and by the Mongols "Statur." It is met with in troops of from five to fifteen individuals, led by an old stallion. Apparently the rest of these troops consist of mares, which all belong to the single stallion. They are lively animals, very shy, and with highly-developed organs of sight, hearing, and smelling.

They keep in the wildest parts of the desert, and are very hard to approach. They seem to prefer especially the saline districts, and to be able to do long without water.

The pursuit of this wild horse can only be carried on in winter, because the hunter must live in the waterless districts, and must depend upon a supply of water from melted snow. As may well be believed, such an expedition during the severe cold of winter into a remote part of the desert must take at least a month. During the whole time of his stay in the Dsungarian Desert, Przevalsky met with only two herds of this wild horse.

In vain he and his companions fired at these animals. With outstretched head and uplifted tail the stallion disappeared like lightning, with the rest of the herd after him. Przevalsky and his companions could not keep near them, and soon lost their tracks. On the second occasion they came upon them from one side, yet one of the herd discovered their presence, and they were all gone in an instant.

The single specimen of Przevalsky's horse subsequently procured is now in the Museum of the Academy of Sciences of St. Petersburg, and is the only example of this species in Europe.

Proceedings of Veterinary Medical Societies, &c.

ROYAL VETERINARY COLLEGE.

THE Session opened on October 1st, and among others present were H. G. Sutton, Esq., in the chair; Lieut.-Gen. Sir F. Fitzwygram, Bart., M.P., and Sir James Tyler, Governors of the College; Professors Pritchard, Williams, Walley, and McCall; Messrs. Dray, Greaves, H. J. Cartwright, Cope, Peele, Borthwick, T. S. Price, T. Dollar, Banham, P. Taylor, W. Wilson, Stainton, E. M. Davey, Geo. Williams, and Simonds.

The CHAIRMAN, in introducing Professor Brown, said: We are met together to-day at the invitation of the Principal and the Professors of this College to hear the introductory address to be delivered by Professor Brown, the veterinary adviser to Her Majesty's Privy Council. I feel sure it is a great pleasure to the Professors of this College to see so many gentlemen met together to show their interest in the work of the College, and to hear this address.

Professor BROWN: Mr. Chairman and Gentlemen, the custom of delivering an annual address at the commencement of the winter session of this College has its uses. It enables the lecturer to touch upon certain current topics which will be outside his ordinary functions. It permits him, if he feels so disposed, to offer to those who are commencing their studies a little good advice, albeit not always free from the apprehension that such advice is sometimes more blessed to him that gives than to him who takes it. Then, also, if he feels so disposed, he may improve the occasion by moralising a little on the flight of time, the stuff that life is made of.

As members or students of a profession which has high aims and grand objects, it will not be uninteresting to us to try and find out what is the exact position we occupy in the economy or house law of the *polis* or State. We have clearly certain duties to perform, and we are, although we may not clearly realise it, servants of the State, and not its masters.

One of our great masters of English prose (Mr. John Ruskin), in an "Essay on Political Economy," says that there are five typical professions which are necessary to the wellbeing of all civilised communities. There is the pastor to teach it, the physician to keep it in health, the soldier to defend it, the lawyer to administer justice, and the merchant to provide. He goes on to remark that it is the business of each one of these to live by his profession. Well, gentlemen, we do not meet you with any initial difficulty here. Possibly some of us might even be disposed to contend a little too strongly for the circumstance of the living; at any rate we are not disposed to dispute the fact that "the labourer is worthy of his hire," although it happens not unfrequently that this quotation, coming from the higher Authority, is referred to with something like fiendish ingenuity as an apology for all sorts of extortion and robbery. If you remember under what conditions these words were first spoken, it will probably occur to you that the persons addressed were really labourers, and not amongst those who were inclined to take their work luxuriously. They were told also when they entered a place to take just exactly what they could get, and not concern themselves too much about its quantity or quality. In fact, this hire which they were to accept was a very small thing indeed, and not uncommonly consisted of buffetings and public scourgings. Not pushing the point too far, we may allow that all of us are justified in living by our profession. But there is a consequence which the writer to whom I have referred draws from this proposition which might not be quite so acceptable. He says all are justified in living by their profession, and all are bound on due occasion to die for it—an idea by no means so easily accepted; a conclusion which

requires something in the way of proof. Well, gentlemen, let us spend a few moments in seeing how far this principle may be carried. What is the due occasion on which a man is to sacrifice his life for the benefit of his profession? We shall have no difficulty at all in regard to one of the professions. If I refer to that of the soldier, who is to defend the State, you will recognise the fitness of the position. In his case it is his duty to carry his life in his hand, and he is bound to die rather than turn his back upon the enemy in the face of battle. We clearly understand that "a discharge of artillery may mow into a level line of red clay an advancing regiment, and that out of the separately Christian named portion of that ruinous heap may go forth some essential condition of soul unwillingly released." The noble soldier who honours us to-day with his presence would shudder at the suggestion that the men under his command would quietly seek a place of safety under the plea that it was their business to live by their profession, and not to die for it. Well, gentlemen, take another instance: the pastor is bound to die rather than countenance the teaching of error, and we are disposed to admit this. We know, as a fact in history, that thousands of pastors have died cheerfully rather than countenance the teaching of error; and we should see the extreme unfitness of the case if it were once clearly shown to us that the teacher had deliberately chosen to teach what he knew or believed to be wrong, merely because the sacrifice of his life would have been the penalty of his refusal. Then, if we go to the physician, we are still treading on perfectly safe ground. He is called upon to die rather than quit his post in time of plague. It would certainly seem a strange proceeding if he were to attempt to quit his post under such conditions. We heard lately of the inhabitants of a city flying in terror from the advancing cholera; but it would seem monstrous if all the doctors in the place had packed their portmanteaux and taken the first train away from the threatened city. Therefore we have no difficulty in their case, and these three are all that concern us. I may say shortly that the writer contends that the lawyer is bound to sacrifice his life rather than countenance injustice, and the merchant rather than supply bad quality or false quantity of food; but I feel a certain amount of difficulty in carrying the argument farther, and it is not at all essential to my present purpose.

My object now is to inquire what is our due occasion of dying for our profession, admitting that we are, under ordinary conditions, justified in living by it. As a section of the medical body we take our position amongst the first three professions referred to. As the physician has to keep the people in health, so the veterinary physician or doctor has to keep the animals in health; and it will be an interesting point for us to inquire how, under these circumstances, it can possibly ever be incumbent upon us to sacrifice our lives in the performance of our duty. In touching this question, allow me to suggest that by the terms "losing his life" I include necessarily all minor sacrifices: the greater contains the less; and if it be shown that the physician is bound to sacrifice his life rather than quit the post of duty, it may be fairly allowed that he is bound to sacrifice time, talent, money, ease, all that goes to make up life, when the work which he is called upon to do necessitates such a sacrifice.

We are of course, gentlemen, by the mere accident of circumstance, exempt to a large extent from the risks which touch the human physician, but our history is not wanting in instances of martyrs to the cause of science. There are cases from time to time which show that the veterinary surgeon is perfectly ready to face the risk of contact with a disease which may be fatal to himself, not only without flinching, but commonly without thinking of the results. I give him credit commonly for risking his life without flinching when, if the question were fairly put to him, he would not risk any

of his money. It is constantly the case that when a man's heroism is allowed to have its fair chance of displaying itself, that he proves equal to the occasion, but in smaller matters the question may arise whether or not he might frequently fail to take the position which he ought to occupy from an ill-grounded and somewhat slavish fear of the consequences. Now, we are justified in asking what are the particular conditions under which we may be called upon to sacrifice anything at all. I have already admitted that we are bound to live by our profession, but in allowing that, gentlemen, let me ask you to take it as a point which might be proved if time would allow it, that you are not to make the living by the profession the essential point. You are not to put yourselves in that category of men who are described by the writer to whose works I have already alluded as the "fee-first men"—the men who prefer their fee to their work. To put it more plainly, you may know distinctly whether or not you are in the right way by deciding whether you would rather save your fee and lose your patient than you would save your patient and lose your fee. I believe myself that you, all of you, when fairly put to the question, would elect to save your patient at all hazards—in fact, that you would elect to do the work thoroughly, quite without reference to the amount of fee you would get for it. But I am not quite certain that you have always succeeded in conveying that idea to the public. We hear constantly a great deal talked about the importance of maintaining the interest of the veterinary profession. We hear very little indeed about the higher interest of the large body of stock-holders who are the owners of some 45,000,000 of animals which constitute the animal population of this kingdom. If you succeed in conveying the impression to these men that your primary object in carrying out your duties, which are, recollect, to maintain that cattle population in health—not only to cure its diseases, but to prevent them—if you succeed in conveying the impression that you think more about the fee than you do about the performance of the work, you may depend upon it that they will not ask for your assistance; but if you will, on the other hand, lead them to believe that you take a delight, as all chosen workmen do, in the work—that you are more anxious to do that work well than to get your fee for doing it, I, for one, entertain the conviction that the relationship between the veterinary surgeon and the agriculturist would be closer in a short time than it ever yet has been in the history of either profession.

You may inquire in what way you are to proceed? Gentlemen, the ways are numerous enough. In your ordinary practice there is such a thing as thorough work to do, not a mere glancing at the case under your notice, but a complete analysis of everything connected with it, a certain evidence of painstaking which the looker-on appreciates thoroughly, even though he may not exhibit any signs of his appreciation. There are works of investigation still to be carried on, problems in pathology yet unsolved, and as far as we can see, not in the right way of solution for some time to come; and there are your official duties, in which a very considerable portion of the profession are now engaged under the laws relating to diseases of animals. In this matter alone it is unfortunately the case that there is an apprehension abroad that the work is done in proportion to the pay, and no more unfortunate presumption could be possibly allowed to find its way into the public mind. It should clearly be made evident that the veterinary surgeon considers himself bound to aid wherever his advice can be of use, and that he is prepared at all hazards to do the work which he finds to do thoroughly, whether he gets paid for it or not. You have heard perhaps the story of that sculptor who was engaged in carving with accuracy of detail the back of the head of a figure which was to adorn a temple. The lookers-on derided him. "What," said they, "devote all that time and skill to carving a part of the figure which is to be

sunk into the wall! None will see it!" "The gods will see it," was the answer. Take that side by side with another story which I listened to a short time back. Two workmen of the period were discussing their grievances, as workmen of the period do sometimes, but not always with sufficient reason. One complained that some one had offered him half-a-crown to beat a large carpet and he refused it. The other said, "Well, I should have taken the half-crown and beaten the carpet accordingly." There you have them, gentlemen, the two sharply defined, the heathen sculptor on one side and the Christian workman of the nineteenth century on the other. One placed himself in that category of which it is said, "You that take your work first and your fee second are the servants of God, you who take your fee first and your work second are the servants of the fiend."

Gentlemen, there can be no question that our course as professional men is perfectly well defined. We are bound on all occasions to recognise our high responsibilities to the State. Your fees are necessary to you; you have families to support; you have a position to maintain; but whenever the fee is made first and the work second, the work is necessarily badly done. When your whole soul is thrown into the business before you, you take the position of the chosen workman whose greatest delight is in the contemplation of his own finished work.

Having sketched thus cursorily the position and objects of our profession, let me address myself to those who are now commencing, or are here to continue their studies. You have come here to learn the art, and I was going to say the mystery of medicine, but I say the art and science of medicine. The mystery of medicine belongs to the time of the alchemists and other magicians—it is of no use to you now. You may try to maintain your nostrums handed down from your great-grandfathers, and you may be most sedulous to avoid publishing them for the benefit of the world, but the world does not care a straw about them. All the popular literature of the day is replete with the most exact and laboured scientific information. Every agricultural paper refers to the experiments of Pasteur and Koch and other continental pathologists, as well as those of our own school. If you want to realise clearly what I mean by the public literature of the day in connection with the advance of science, purchase the *Pall Mall Gazette* for yesterday and read that. I won't tell you what you will find, because it is quite worth the trouble and expense of obtaining the copy for yourself. If you do not thoroughly realise the truth of the proposition which I have suggested, that all mystery in the art of medicine is for ever gone, it must be on account entirely of your mental obtuseness, and not for the want of the fact being apparent. Well, I say, you have here to learn the art and science of medicine applied to the lower animals, and you will find at the existing veterinary colleges remarkable—may I be permitted to say fatal?—facilities for acquiring knowledge.

I look back some quarter of a century, and I remember that the whole curriculum of this institution was in the hands of Professor Spooner, Professor Simonds, and Professor Morton, "each name a household word." Each man had his work well cut out for him; and if you look at the results of the teaching of that time, as exhibited by those gentlemen who have honoured us with their presence to-day from distant parts of the country, you will require no statement from me to prove that the teachers' hearts were in their work, and that they did not belong to that list of fee-first men. But look at the present condition of the educational staff. You have every section elaborately arranged for your convenience. You have the subject of the pathology of the horse treated by Professor Robertson, whose long experience and power of expressing his ideas leave very little indeed to be done by you, beyond the exercise of necessary attention to enable you to take full advantage of his instruction. You have the subject of physiology separately introduced by a

distinguished member of the human school (Mr. Power). You have the subject of parasitic disease brought under your notice by the highest authority in this country, probably one of the highest in Europe (Dr. Cobbold). In chemistry you have the whole of the vast experience and the elaborate arrangements which Professor Tuson has brought to bear upon the subject for your benefit. You have Professor Axe to teach you morbid anatomy, and you have the subject of clinical medicine and demonstrations in the anatomical theatre dealt with by competent officers. Under this extended system of tuition you are not asked even to seek for the mental food which you require—it is collected for you with elaborate care, triturated into a fine assimilable condition, and positively thrust into your mental stomachs, very much in the way that men feed poultry for the market. It is quite conceivable that in taking your learning in this luxurious way you may fall into a somewhat somnolent condition; in short, that you may over your studies fall asleep, and work them out in a dream. The lethargic attitude, gentlemen, is not the normal one. The condition which you ought to assume is the opposite to the lethargic condition; your attitude should be the fighting attitude. We are told that war is the foundation of all art and of the higher virtues and faculties of man. The common opinion that peace and the virtues of civilised life flourish together is a wholly untenable position, and the vices only neutralise life. We hear of "peace and learning," "peace and plenty," "peace and progress;" but these are not the words that the muse of history couples. The words on her lips are, "peace and sensuality," "peace and selfishness," "peace and corruption," "peace and death." "All great nations have learned their truth of heart and strength of foot in war. They have been taught by war and betrayed by peace; they are born in war and expire in peace." It is not, however, of all wars of which this may be said. There are creative and foundational wars, as well as wasting and oppressive wars; but it is of the foundational and creative war that I am speaking, and I tell you that you are bound to enlist yourself as soldiers in the ranks of those who carry it on. There are giants to be slain in these days, as in King David's time—ignorance, prejudice, and a host of others—and they are only to be knocked over by smooth stones chosen with accurate skill from the brook which flows for ever from the fountain of knowledge, and when chosen they must be sent straight to their mark in the name of the Lord, in the name, that is, of the eternal verities, and with absolute rightness or righteousness of aim.

Gentlemen, the object of your ambition is placed on the top of a hill; it is an Acropolis, the highest point in the Capitol. It is your business to struggle ever upwards and onwards, and according to the efforts which you display here, where you may meet with all possible aid and sympathy, will be your efforts in the great arena of the world, where you are far more likely to meet with strenuous opposition. But without discouragement go on; I say to you, go on and prosper, as you will according to your deserts. And I conclude in the words of a sentiment which used to form, and probably does now form, a part of the solemnities at the convivial meetings to which students are occasionally addicted—"In ascending the hill of professional prosperity may you never meet a friend."

List of Medals, Class Prizes, etc., awarded at the Opening of the Winter Session, 1884-5.

COLEMAN PRIZES.

Silver Medal	Mr. John Edward Rickards.
Bronze Medal	Mr. Edward Taylor.
Certificate of Merit	Mr. George Henry Evans.

CATTLE PATHOLOGY PRIZES.

Silver Medal	Mr. Edward Taylor.
Certificate of Merit	Mr. Samuel Cliffe.

SCHOLARSHIP.

£25 *per Annum for Two Years* ...	Mr. Charles A. Lye.
Very Highly Commended	Mr. P. G. Bond.

CLASS PRIZES.

CLASS C.

Hippopathology	Mr. John Edward Rickards.
Cattle Pathology	Mr. Henry Smith.
Morbid Anatomy	Mr. John Edward Rickards.
Helminthology	Mr. John Edward Rickards.

CLASS B.

Anatomy	Mr. A. Cawdle.
Histology	Mr. C. Winteringham.
Physiology	Mr. A. Cawdle.

CLASS A.

Chemistry and Toxicology	Mr. P. G. Bond.
Materia Medica	Mr. J. D. Roberts.
Practical Chemistry	Mr. W. T. Wilson
Botany	Mr. W. T. Wilson. } *aq.* Mr. A. Moore. }

Certificates Awarded.

FOR ACTING AS CLINICAL CLERKS.

Mr. Axe, H. J.	Mr. Reid, W. S.
„ Williams, T.	„ Heinemann, C. W.
„ Barrett, A.	„ Pemberton, H. L.
„ Langdon, W.	„ Golding, G. H.
„ Burghope, L.	„ Rickards, J. E.
„ Higgott, T. H.	„ Hammond, J.
„ Snowball, W. D.	„ Whigham, W. B.
„ Baker, T.	„ Blanchard, S. J.
„ Hewitt, T. G.	„ Drewitt, W.
„ Gill, A.	„ Bazley, F.
„ Skelton, C. F. H.	„ Brooks, W.
„ Smith, H.	„ Butler, E. R.
„ Evans, G. H.	„ Stear, G.
„ Cliffe, S.	

FOR ACTING AS MONITORS.

Mr. Axe, H. J.	Mr. Hammond, J.
„ Singleton, H. M.	„ Smith, H.
„ Skelton, C. F. H.	„ Rickards, J. E.
„ Evans, G. H.	

FOR ACTING AS PROSECTORS.

Mr. Axe, H. J.	Mr. Butler, E. R.
„ Gill, A.	„ Rickards, J. E.

FOR ACTING AS ASSISTANTS AT THE SMITHFIELD CLUB SHOW AT THE AGRICULTURAL HALL, DEC., 1883.

Mr. Butler, E. R. | Mr. Heinemann, C. W.

FOR ACTING AS ASSISTANTS AT THE ROYAL AGRICULTURAL SOCIETY'S SHOW AT YORK, 1883.

Mr. Taylor, E. | Mr. Hammond, J.

New Students.

Mr. James E. Allen.
" Henry E. Allen.
" F. B. Drage.
" Jonathan James Fry.
" James Wooding.
" William Owen.
" William A. Stainton.
" Edward R. McHugh.
" Thomas E. Barcham.
" Edward J. Porter.
" Frank B. Ditmas.
" William W. Goldsmith.
" William Folsetter.
" F. Harvey.
" Charles N. Parsons.
" James R. C. Hogg.
" Alfred E. Gostling.
" Samuel B. Baker.
" James A. Worsley.
" Frederick W. Watchorn.
" Alfred E. Branch.
" Harry Hall.
" Joseph Healy.
" John C. Collings.
" Louis Mitchell.

Mr. James A. Legg.
" Arthur Crapp.
" James W. Crowhurst.
" Harold H. Rocke.
" John H. Jones.
" William A. Clifford.
" Harold S. Briant.
" Samuel Wharam.
" Robert Wilson.
" William R. Elstone.
" James Sherley.
" Frederick Walmsley.
" William Price.
" Augustus C. Newsom.
" T. A. T. Hutton.
" Thomas L. Bickford.
" William J. Moran.
" Thomas Spencer.
" E. Ainsley.
" W. L. Gardener.
" F. Aulton.
" Sidney J. Williams.
" William H. Willsher.
" E. E. Stokes.
" John T. McLean.

ELIGIBLE TO COMPETE FOR SCHOLARSHIP TO BE AWARDED AT THE CLOSE OF THE SUMMER SESSION, 1885.

Mr. E. Ainsley.
" T. L. Bickford.
" W. A. Clifford.
" T. A. T. Hutton.

Mr. A. C. Newsom.
" T. Spencer.
" F. W. Watchorn.

The CHAIRMAN remarked that although feeling his inability sufficiently to discharge the duties which his present position entailed upon him, he had nevertheless great pleasure in being present on this occasion. He thanked Professor Brown in his own name, and for those who had now listened to his address. He desired to say that the Governors of the Royal Veterinary College, whom he now represented, were ever most anxious to assist in every way in promoting the interests of veterinary science, particularly as represented by this College. He felt indebted to the lecturer for the manner in which he had placed the subject of the study of veterinary medicine before intending students, and he trusted that, pursued with such motives as he had pointed out, the result would be lasting benefit, both to the public who might require the services of veterinary surgeons, and to the practitioners themselves. He was pleased on this occasion to be able to state that, in regard to the general work of the College, both as a teaching institution and an hospital for sick

animals, where the actual details dealt with in the lectures might be carried into practice, it was in a fairly satisfactory condition.

PROFESSOR ROBERTSON, in moving a vote of thanks to the Chairman for his presence on the present occasion, drew attention to the fact that in thus conveying our thanks to the Chairman we were acknowledging our indebtedness to a body of gentlemen, the Governors of the Royal Veterinary College, whose representative the Chairman was. These gentlemen, from the most disinterested motives, and often at considerable inconvenience to themselves, had for nearly a century exercised a fostering influence in respect of the study of veterinary medicine in Great Britain; while, from his own knowledge, he could testify to the steady anxiety they had always exhibited to further in every way the interests of this College and of the profession.

GLASGOW VETERINARY COLLEGE.

THE winter session of this institution began on 29th October, when the introductory address to the students was delivered by Principal M'Call. The proceedings took place, as usual, in the lecture-hall of the college, at 83 and 85, Buccleuch Street, and there was a large attendance—Dr. J. B. Russell in the chair. In addition to a large number of students, the following gentlemen, among others, were present:—Rev. R. Blair, Cambuslang; Rev. Mr. Scott, Easterhouse; Rev. A. R. Story, Carmunnock; Rev. D. Watson, Woodside Church; Dr. Moore, Greenhall, Blantyre; Dr. Knox, Royal Infirmary; W. Lucas, Esq., Writer; John Wordie, Esq.; J. Cuthbert, Esq.; J. M'Intosh, Esq.; D. Forsyth, Esq., M.A., B.Sc.; W. Moore, Esq.; James Miller, Esq.; Professors Limont, Cooke, Macqueen, Renfrew, and Stewart, Glasgow Veterinary College; Professor Lewis, New Veterinary College, Edinburgh. The following veterinary surgeons were also present:—G. H. Fenton, A.V.D.; Mr. M'Gill, London; Messrs. Houston and M'Geoch, Paisley; Mr. Robinson, jun., Greenock; Mr. Kerr, Dalry; Mr. M'Gregor, Ayr; Mr. Bowie, Stranraer; Mr. Campbell, Kirkcudbright; Mr. Constable, Inchture; Mr. Hunter, Dundee; Mr. Freeland, Blairgowrie; Mr. Brown, Holytown; Mr. Jarvie, Carluke; Mr. Nesbit, Galston; Mr. M'Donald, Campbeltown; Mr. Gabbie, Dundalk; Mr. Gardner, Helensburgh; Mr. Peddie, Cathcart; Mr. Brownlie, Coatbridge; Mr. M'Gregor, Dumbarton; Mr. Taylor, Cathkin; Mr. Allan, Clarkston; Mr. M'Ilwraith, Milngavie; Messrs. W. Anderson, R. Mitchell, J. Weir, Tweedley, Boyle, Frew, Wyper, Muir, and Wallace, Glasgow.

Prof. M'CALL said: Mr. Chairman and Gentlemen,—As is customary on all such occasions as the present, we inaugurate the duties of the winter session by the delivery of an introductory address to the students; and as the veterinary horizon has for some time been clouded with subjects of grave importance, not only to the students, but also to the profession and the public, it has been considered advisable that I should deliver the introductory address to-day, and make these more especially the subject of my discourse.

I shall, in the first place, refer to the Royal College of Veterinary Surgeons—its constitution and powers, its Council, and Board of Examiners. In the second place, I shall speak of the results of the operations of the Contagious Diseases (Animals) Act, more especially within the City of Glasgow, and more particularly with reference to the disease Pleuro-pneumonia Epizootica in cattle, and thereafter conclude by offering a word of explanation and advice to the junior students.

Royal College of Veterinary Surgeons.

For the information of those who are not acquainted with the constitution and functions of the Royal College of Veterinary Surgeons, allow me to say

that it is not a teaching institution, and has no students of its own. It is a corporate body, composed of all the members of the profession, and its sole function is to examine the students of this and all other teaching colleges affiliated by Royal Charter to it, and to grant the diploma qualifying them to practise.

In 1876 it was decided by the Council of the Royal College of Veterinary Surgeons that the candidates for diploma should be subjected to three examinations, viz. — at the first to an examination in materia medica, pharmacy, chemistry, toxicology, and botany; at the second to an examination on the anatomy of the horse and other domesticated animals, physiology, and histology; and at the third and final, to an examination on morbid anatomy, and pathology, veterinary medicine and surgery, practical examination of horses and cattle as to soundness, age, disease, etc.

When the system was inaugurated I expressed myself as doubtful of its success, not that I so much objected to the three separate examinations as to the order and division of the subjects, and I regret to say that each year's experience seems to justify my doubts and to increase our difficulties. Time will not permit me to enter into details, still I think it is specially due to our first-year students to point out a difficulty with which they have to contend in passing their first examination.

I have just stated that materia medica is a subject of the first examination. Now, an examination in materia medica which only deals with the botanical or other classification, the preparation, the active principle or principles, and the standard dose, is a most unsatisfactory one—unsatisfactory alike to the examiner and the student—nay, I would say, unfair to both, and to the profession as well. The object of materia medica, in one sentence, is to put the student in possession of a remedial agent, having, or believed to have, in a greater or less degree, a definite or specific and curative action in a specific or given disease. Now, if such be the facts, it must be self-evident that the student can only apprehend the teachings of materia medica when he has comprehended the teachings of chemistry, anatomy, and pathology. Take, for example, the familiar drug, aloes. Its action, as most persons know, is purgative. Its dose, in a full-sized cart horse, is from six to eight drachms. Now in Pneumonia—that is, inflammation of the lungs—if such a dose be given, it will most likely produce congestion and irritation of the feet, or Laminitis—or congestion and inflammation of the bowels—super-purgation, and death. So that under these circumstances its action is not displayed as a purgative, but as a most powerful irritant poison. Then take a saline purgative in the ox, say sulphate of magnesia. The dose is from 1lb. to 1½lb. In constipation of the third stomach—inappropriately termed Omasitis—such a dose is no use, six times the dose may be no use, and six times that as well. A cow may have administered to her a small apothecary-hall of purgative medicine, and still the animal is not purged. Super-purgation, and death as a result, is almost unknown in cattle practice, but super-purgation and death in horse practice is much too common. No animal, not even man, comparatively speaking, is so easily and certainly purged as the horse, and no animal so rapidly succumbs to the action of a purgative. The lesson we learn from these facts is, under no circumstances freely purge a horse, and in active disease particularly avoid irritating the bowels. If you consult the older works on veterinary science, you will discover that the mortality in horses was very great in many diseases in which now we have but few deaths. And how has this result been brought about? Principally by avoiding bleeding and purging. I have not bled a horse for twenty-five years, and have discarded purgatives in the treatment of active disease for a like period, and I have not had a death from super-

purgation since I adopted this line of treatment. But to return to the ox: from the great volume of the stomachs, the weakness of muscular contractility and nerve power, purgatives are always uncertain, and in practice we find that, instead of multiplying the dose of the purgative, if we wish to rouse the stomach and bowels into action, we must restrict the purgative to a full dose, and follow it up by the administration of stimulants and nerve tonics in small and frequently repeated doses. A vast number of other medicinal agents have like peculiarities; now, of almost all these peculiarities, junior students can know nothing when they stand their examination in materia medica, for under the present system of tuition and examination they only enter on the study of medicine (disease) after they have passed their first professional examination. For the reasons stated, and others which could be specified, I hold that materia medica, instead of being a subject of the first examination, should be a subject of the third or final, and until it is so, the examination will remain unsatisfactory alike to teacher, student, and examiner.

Regarding the second examination, I have also to express dissatisfaction, but the students are largely responsible for the dissatisfaction to which I am about to refer; still the Council cannot be exonerated. I volunteer the opinion that the students who have graduated in this college since 1876 till the present time have not been as well grounded in anatomy as their predecessors, and I know that the same charge can be brought against the students of London and Edinburgh colleges. The reason is not far to seek. Under the old system of examination (antecedent to 1876) two years were spent, and earnestly spent, in acquiring a knowledge of anatomy; but under the new system by far the greater number of students in this and other colleges acquire all the anatomical knowledge they become possessed of in one winter session, namely, that following the first pass examination. Like all else done in a hurry, it is superficial, and it barely suffices to enable the student to pass the ordeal of an examination; several fail, and few, very few, pass a high standard.

I have always held the opinion that an intimate knowledge of anatomy was essentially necessary to the acquirement of a knowledge of pathology and the treatment of disease, and the more I learn the more I am convinced that the opinion is a correct one. If the students would devote a fair proportion of their time to anatomy during the first as well as the second session of their attendance at college, there need be little hesitation in predicting that, with the increased facilities for acquiring a knowledge of anatomy which exist in all the colleges, the students, under the new system, would not only equal, but excel those under the old.

But, as only a very few students, apparently, will interest themselves with anatomy during the first session, I contemplate, with the approval of the principals of the other colleges, moving the Council to delete materia medica from the first examination, and substitute a junior examination on anatomy at the end of the first session, covering, say, osteology and myology.

Passing now to the third examination, I would say that the subjects and the order of their arrangement are well chosen, and sufficiently diversified to test the ability of all candidates for the degree. Indeed, judging from the results of the past two years (since the appointment of the new Board of Examiners), it does appear that the subjects of examination are too numerous, or that the standard adopted by the new Board is too high, or possibly both.

As the third examination hinges almost entirely upon subjects which I teach, and as a considerable number of students have been rejected in this pass (but in justice to my students and myself, as small, if not a smaller,

percentage than in any other veterinary college), I have my own views as to how these results have been accomplished.

Shortly before the appointment of the Board of Examiners, as the pages of the *Veterinarian* and VETERINARY JOURNAL will testify, certain parties wished to prove that the time had now arrived when the profession should conduct its own examinations, and cast aside the assistance which it had so long received from medical and other scientific gentlemen.

Following in the wake, came the advocacy of the serving of an apprenticeship with a veterinary surgeon prior to the student entering upon his collegiate course, with, of course, the three years' services for nothing, and the hundred guineas premium less or more. These, with many in the profession, were looked upon as popular movements, and had strong advocates in the Council; but *had* the time come when the profession, and the profession alone, could conduct with like advantage the examination of its candidates for diploma, and *had* the time arrived when it was rendered imperative that our students should serve an apprenticeship? In neither case was it so in my opinion, and I found that the principals of all the colleges and a large number of the *élite* of the profession held the same opinion. However, the time came for the appointment of a new Board of Examiners, and the majority of the Council, by their vote, being in favour of dispensing with the services of medical gentlemen, the change was effected, and not only the medical gentlemen, but several other eminent veterinarians, who had for long acted as examiners, were deposed, and new examiners were appointed.

The Council had the power to appoint their examiners, and they did so. Elated with their success, now came the apprenticeship question to the front, but the Council, under their Charter, found that they had no power to stipulate for any such arrangement. Foiled, but not defeated, they applied to Government for a new or supplemental Charter, to give them the power they did not possess, and also to increase the fees for examination of students for the diploma from ten to thirty guineas. Believing, as I still believe, that serving an apprenticeship before entering college, is, in popular language, "placing the cart before the horse"—and quite as unnecessary in the veterinary profession as in the medical, in which it has for long been discarded—in consort with the principals of the Edinburgh colleges, I did what I could to frustrate the efforts of the Council, and I am glad to say that our united efforts, supported as they were by the influence of the Highland and Agricultural Society of Scotland, and the Town Councils of Edinburgh and Glasgow, had the effect with the Government of throwing out the apprenticeship clause, and of restricting the examination fee to thirteen, instead of thirty guineas. The new Board in due course entered upon their duties as examiners, and, I suppose, like the proverbial new broom, they felt it incumbent on them to "sweep clean," very clean, if not with a vengeance. The rejections under the old system ranged from five to fifteen per cent., but in the hands of the examiners for the final—and all at once—it ascended from fifteen to fifty per cent., and, lamentable to relate, some of the best students were included among the rejected candidates. Panic-stricken, the rejected students and their parents besought the principals of the colleges to explain the cause of the fatality, and the principals in their turn asked the examiners to explain; but nothing more satisfactory could be elicited than that the candidates could not answer the questions put to them, and that they were "a very ignorant lot." Entertaining the opinion that the students of this college were an *average*, and not an *ignorant* lot, and that somehow or other a serious misunderstanding had arisen, I put myself in communication with the other colleges, in the hope of eliciting some further information, but I found that they were in exactly the same position as ourselves

The only explanation, I suppose, that can be given under such circumstances is, that the new examiners had embraced new doctrines of disease, and new methods of treatment, and the students being grounded in the old faith, and ignorant of the new, consequently fell under their displeasure. The students, unfortunately, felt the consequences, but surely the examiners were wrong when they called them an ignorant lot. The ignorance—if ignorance was exhibited—I hold, lay with the teachers and the old examiners, and yet, if we make an individual comparison, all must admit that the members of the new Board are not competent to catechise the old Board, much less to set aside their opinion.

Not satisfied yet with the turmoil produced, an attempt was now made to take the educational examination of the students out of the hands of the colleges, and to place it in the hands of the Council and the College of Preceptors—an English institution unknown in Scotland. Having now had "a bite of the bridle" of our English friends—for be it remembered the new Board of Examiners and the Council of the Royal College of Veterinary Surgeons are almost composed of Englishmen and Londoners—and finding it rather distasteful, I objected to this interference and refused, with all deference, to obey the ruling of the Council.

Roused now to a sense, as I conceived, of injustice having been committed, and the urgent demand for reform, I set myself the task of endeavouring to elicit the cause of all this disturbance, and the need for it. Prior to the appointment of the new Board of Examiners it was alleged, as has been previously stated, that there was no lack of competent veterinarians to fill all the offices of examiners; that the office of examiner was highly valued, so much so that the profession could not afford to allow the honour to be shared in by medical men or other than members of the profession. But let us see how this is borne out.

By the Charter of Incorporation power is given to appoint twenty-two examiners, but strange to relate, the Council, instead of appointing twenty-two examiners, and dividing the honours about equally betwixt English, Scotch, and Irish practitioners, only appointed twelve, and of these, ten reside in England and two in Scotland, and consequently there is a not a single Irishman on the Board. The result of this arrangement has been the placing of the examinations of the students in the hands of a very limited number of men, and not only so, but, from the paucity of the examiners, one man alone acts at a table, and in some cases the same individual figures on more than one Board, and, of course, draws double fees. In my opinion no single examiner, however competent, should sit, or be allowed to sit, in final judgment on the candidates for admission to a profession. There should be two practitioners and one teacher on every table—the teacher to lead the examination in the lines of the most recent experimental investigation or research, and the two practitioners to examine more especially on the lines of every-day experience in practice, and to counteract any bias the teacher might display towards the student in the final award. Such a Board, as briefly indicated, would always give satisfaction, because it would compass all a student is taught or expected to know, and until some such an arrangement be made, no student, however well-grounded in his subjects, can calculate the result of his examination. But why were there only twelve examiners appointed? The Charter gave power to confer the coveted honour on twenty-two men, but twelve only received it, and of the number, two do not belong to the profession, and other two do not live by practising it. Why was it kept back? Were there only ten men in the profession competent to fill the office of examiner? If so, then it was not the fact, as has been alleged by certain persons, that there were a host of parties in the profession fit to fill the office of an examiner, and if so, it would have been

better not to have deposed the medical and other gentlemen who so efficiently, and to the satisfaction of all concerned, discharged the duties of examiners in the old Board.

But if it be affirmed that there were twenty-two competent examiners to be found in the profession, and they were known, then it follows that ten only were appointed, so that the individuals receiving the appointment might draw larger fees for their services, and that some of them might even fill a double office. And there does appear reason for sharing in this view, as the ten examiners have been drawing fees averaging from thirty to one hundred and thirty guineas each. If I have wronged the examiners by the inferences drawn from the facts stated, no one can regret it more than I would; and if I have done so, they have now an opportunity to put the real explanations before the profession, and thus right themselves; and if they can, you and I, and all well-wishers to the profession, will feel grateful to them. But to proceed, six members of Council retire (they are eligible for re-election), and six men are elected annually, in the month of May, to take their place. It was the Council who made the alterations I have referred to, and no other power than the Council can modify or alter them. With a view, then, to obtain a modification of them, I offered myself as a candidate for a seat in the Council, and, with the assistance of my professional brethren, I obtained it in May last; and I take this opportunity of thanking those who supported my claim by registering their vote in my favour.

At the first meeting of Council after my election I gave notice that at next meeting of Council I would move—"That at the 'C,' or 'final,' examination the number of individual examiners be such as is indicated by Bye-law No. 7, relating to examinations. That is to say, that two separate and distinct individual examiners conduct each department or section of that examination, or that four additional examiners for the 'C' examination be appointed."

That motion, gentlemen, came up for discussion in London on the 2nd of the present month, and I rejoice to say that it was not only carried, but carried with a unanimity which augurs well for further changes in the same direction. The motion was carried, and four additional examiners were appointed there and then, and these gentlemen will assist in the coming examination in January. General Sir Frederick Fitzwygram (who, although a nobleman by birth, yet takes the deepest interest in our profession) also gave notice that at next meeting of Council he would move that an additional examiner be appointed to all the tables; and Professor Williams' motion for disjoining the results of the practical and oral examination in the final, or 'C,' also comes up for consideration, and, should they be carried, I do hope that peace and harmony will again prevail.

At the last meeting of Council it was also arranged to place the matriculation examination of Scottish students in the hands of the Educational Institute of Scotland, instead of the English College of Preceptors, so that bone of contention has now been removed. Mr. Forsyth, who has for several years past conducted the matriculation examination in Glasgow, will continue to do so; and, judging from the interest he has in the past displayed in conducting this delicate and all-important duty, we look for good results in the future.

I have thus publicly referred to the circumstances which have of late divided the Council of the Royal College of Veterinary Surgeons and the teaching colleges and students, in order to put the minds of our pupils at rest, knowing, as I do know, how very much and how painfully they have of late been disturbed. And in leaving this disagreeable subject, I desire further to say that no more can the Council of the Royal College of Veterinary Surgeons succeed without the cordial aid of the principals and professors of the teaching colleges,

than can the teaching colleges without the hearty assistance and co-operation of their students. For the teaching colleges to disregard the interests of their students would be to destroy their own existence; and for the Royal College of Veterinary Surgeons to thrust upon the colleges and their students crude and ill-considered schemes is only to weaken its influence, and probably lead to its power (at least over the Scottish colleges) being cast aside.

It has been said that we in Scotland wish to have things our own way, and that if we don't get them we then threaten a Scottish Charter, but that we would not succeed with the Government in our application. Let any impartial mind view our position in the Council at the present time (thirty-one members, with five exceptions, all resident in England), and he will see that we can have little of our own way unless that way be very clearly the true way for the greatest good. And as regards our failing to obtain a Scotch Charter, the less said on that point the better; but it strikes me very forcibly that should the unfortunate day come when the three colleges in Scotland unanimously approach the Government for a Scottish Charter to grant degrees, it will take greater influence than the Council of the Royal College of Veterinary Surgeons can command to stay the hand of the Government. But I for one pray that the day may never come, or, at all events, come not so long as I am at the head of this institution; for while I advocate that there should be no monopoly in veterinary teaching, I do hold that there should, if possible, be no competition in the granting of diplomas. Long, therefore, may the Royal College of Veterinary Surgeons enjoy the sole monopoly of granting the veterinary degree in these kingdoms, but let her be all the more careful how she exercises this great privilege.

There is another point which must not be overlooked in the coming struggle, and that is the appointment of a larger number of Scotch and Irish practitioners, both in the Council and on the Examining Boards. The Royal College of Veterinary Surgeons is not an English institution, any more than an Irish or Scotch institution—it is all three in one. But the almost exclusive monopoly which English practitioners have for long enjoyed in filling its seats of power and honour has led them, more especially the London section, to regard it as their own, and to believe that they have but to resolve on a course of action, and we Scotch and Irish have but to obey. But it is not so; and the sooner they realise their true position, and arrange for a redistribution of seats on a fair basis, the more it will be to the advantage of us all, if we are to remain a united profession.

With these remarks, I now pass on to the consideration of *the past and present results of the operations of the Contagious Diseases (Animals) Act in dealing with Contagious Pleuro-Pneumonia in cattle, particularly in the City of Glasgow.*

An annual tax, varying in amount from the $\frac{1}{32}$ of a penny per £, having been levied in this city to meet the expenses connected with the slaughter and compensation to the owners of cattle affected with Contagious Lung Disease, has, of necessity, given rise to a variety of opinions as to the advisability of the measure. Some have viewed the action of the Government in this matter as partaking of class protection; the class protected with one party being the landlord, and with the other the farmer and dairyman. Much might be said in favour of either side of the question, but nothing is further from my thoughts at present than a discussion on such a subject.

That certain contagious diseases exist in animals, and have existed for a series of years in the past, and that the results of these epizootics has been the destruction of large numbers of our herds, is admitted by all. Acts of Parliament have been passed, and Orders of Council issued, to check their spread, and notwithstanding that they are not indigenous to this country, but imported, still they continue to exist; and the bare fact of their continued

existence has been sufficient evidence for a large section of the community making up their minds that the Acts and Orders, and the whole machinery connected therewith, are utterly valueless, and should be swept away. But, gentlemen, if you will bear with me, I think that I can prove to you that the measures referred to, if stringently applied, would so curtail the spread of these diseases, if not completely stamp them out, and so restrict the money to be levied as a tax, that the ratepayers would have no reason to complain. The grievance is to be taxed, and in some counties heavily taxed; and still contagious diseases continue to spread.

In Glasgow, thanks to our local authority, the various Orders of Council have been enforced with firmness and impartiality, but how many local authorities in Scotland, England, or Ireland, could conscientiously say the same? Not a large number, I venture to assert. But, if Glasgow, and some other local authorities I might name, can show good results from the operation of the Act in their hands, is it not, I ask, reasonable to infer, that most other local authorities might show similar results, if they would but do their duty, and employ properly qualified officials? I think so. What, then, have been the results obtained through the efficient working of the provisions of the Act in the Burgh of Glasgow?

We can most accurately estimate these, by first considering the losses resulting from the spread of contagious diseases in the burgh prior to the passing of the first Act, 1869.

Until the ever-memorable year of the Cattle Plague, viz., 1865, statistics were not available for demonstrating the losses resulting to the dairymen of Glasgow from the introduction and spread of Pleuro-pneumonia Epizootica, or other contagious disease. Having been instructed, by the magistrates of Glasgow, to make an examination of all the dairies and cattle-sheds within the city bounds, with a view to their being licensed under the Cattle-sheds and Burghs (Scotland) Act, 1867; and, also, to furnish statistics of losses sustained by dairymen during the prevalence of the Cattle Plague, I, at the same time, availed myself of the opportunity for collecting statistics showing the losses sustained from Pleuro-pneumonia. In order to make these statistics of practical use, in suggesting measures with the view to limiting the spread of disease, and, also, in demonstrating what a formidable enemy we had to cope with, I carried my inquiries, in every case where I could do so, as far back as the year 1853.

During the twelve years, then, prior to 1866, according to a tabulated statement which I published, 3,759 cows died within the dairies of Glasgow, affected with Contagious Pleuro-pneumonia, and 1,594 cows were slaughtered on account of being affected with the same disease. The money value these animals was estimated at £54,677, thus representing an actual money loss of £4,556 per annum.

From the year 1866 till August, 1869, at which latter date the Contagious Diseases (Animals) Act became law, we have no statistics to guide us in estimating the loss by Pleuro-pneumonia; but from August, 1869, till the present day, I can give an accurate account of every animal which has died or been slaughtered within the Burgh of Glasgow, and affected with Pleuro-pneumonia.

From August, 1869, till August, 1872, 258 cows were attacked—139 were killed, 28 died, and 91 recovered from Pleuro-pneumonia. According to a computation on the same principles as form the basis of the tabulated statement referred to, the value of the cattle destroyed during these three years would be at the rate of £650 per annum.

In 1873 the Privy Council (for whom I also act as Inspector) issued an Order making it compulsory on the local authorities of England and Scotland, but not of Ireland, to slaughter without delay all cattle affected

with Pleuro-pneumonia, and to grant compensation to the proprietor *at the rate of one-half the actual value of the animal* prior to contracting the disease. Previous to this, compensation had never been given in Great Britain. Accordingly, in the month of August, 1873, I received instructions to carry out the provisions of the Order, and, with little variation, I have continued to do so until the present hour; and let us now glance at the results.

In the year 1873-4, 203 cows were slaughtered, and £1,011 10s. 6d. was paid as compensation, being at the rate of one-half actual value. In the year 1874-5, 70 cows were slaughtered, and £502 16s. 9d. paid as compensation. In the year 1875-6, 73 cows were slaughtered, and £676 12s. 1d. paid as compensation; the increase in the amount of compensation being largely due to the fact of the Privy Council having passed an Order that all local authorities were now to pay three-fourths the value of all animals slaughtered, instead of one-half as heretofore. In the year 1876-7, 111 cows were slaughtered, and £712 15s. paid as compensation. In the year 1877-8, 34 cows were slaughtered, and £194 15s. paid as compensation. In the year 1878-9, 54 cows were slaughtered, and £481 paid as compensation. In the year 1879-80, 39 cows were slaughtered, and £381 paid as compensation.

From August, 1880, till 1st July, 1884, *a period of four years, there were no animals affected with Pleuro-pneumonia, the disease was stamped out, and consequently the city had no compensation to pay.*

On 2nd July last we had an outbreak of the disease in a byre in Garscube Road, and it spread to two other cattle-sheds in the neighbourhood; but the affected animals have been slaughtered, and I hope the disease has again been stamped out. If we now cast a glance backwards, and review the facts and figures, we find that for twelve years prior to the passing of the Contagious Diseases (Animals) Act, the losses sustained by dairymen in the City of Glasgow, by Contagious Lung Disease, amounted to £54,677, or a yearly sum of £4,566; but under a system of inspection and compensation, commencing in August, 1873, and extending down to July, 1884—viz., eleven years—the actual money loss has been reduced to £4,950, or £450 per annum, and the actual compensation paid has been £3,960 9s. 9d., or at the rate of £360 per annum; or, in other words, under the system of inspection, and with compensation to the stock proprietor, *the annual loss has descended from £4,566 to £450, and, moreover, it has been demonstrated that Pleuro-pneumonia may be stamped out.*

Regarding the treatment of Pleuro-pneumonia, I am not in favour of inoculation, but immediate slaughter of all affected animals, as, by doing so, the disease is not only stamped out, but, on an average, one-half of the animals in the herd do not contract the disease, or if they do so it is in such a mild form that it would be highly injudicious to slaughter them.

In Edinburgh, as is well known, inoculation has been, and is still, largely practised, and if the reports contained in the blue-book annually published by the Privy Council be correct, I should say that it is anything but a success; but whether or no, two things are certain, that when you inoculate you do not produce the lung affection in the animal inoculated, and that Pleuro-pneumonia is seldom, if ever, absent in the cow-sheds of the City of Edinburgh.

In Ireland, I regret to say, that the disease is never absent, more particularly in and around Dublin.

A short time ago I was consulted, through Dr. Marwick, our indefatigable Town Clerk, by a member of the Cattle Disease Committee, South Dublin Union, regarding the prevalence of Pleuro-pneumonia in that city. Among other things, he wished to know how the authorities of Glasgow dealt with the disease, and what money value they had paid in compensation for the past ten years. On being informed, he replied in writing:—"There must

be something radically wrong in our management here, when there is such an enormous difference in our expenditure compared with yours; our net expenditure for compensation being over £4,500 per annum for the last ten years."

During the month there has been a serious outbreak of Pleuro-pneumonia in the County of Perth, and the local authorities of Perthshire and Glasgow having placed the matter in my hands for investigation, I have had another opportunity of observing how the Act is wrought in some parts of Ireland, and I know it is very much the same all the country over. The cattle in the outbreak referred to came from County Meath, and with the willing and able assistance of the officials at Dublin Castle, I had no difficulty in tracing them from the commencement of their journey in Ireland till they arrived at their destination in Perthshire. The animals, forty in number, were bought up promiscuously in Ireland by a dealer in cattle, and placed by him on a grazing farm in the Union of Kells. Shortly after being placed in the fields, one of the herd developed Pleuro-pneumonia, and was killed. The outbreak was duly reported by the inspector of the district to the local authority, and by them to the Irish Privy Council, and the farm became an infected place for fifty-six days. On the expiry of the fifty-six days, the restrictions, on the recommendation of the local authority, were removed, and the forty cattle were brought up to Dublin, shipped to Glasgow, and thence railed to Perth. Seven days after the arrival of the cattle at their destination one animal showed symptoms of Lung Disease, and was slaughtered; and in other eight days several other animals were also affected. Such is the brief history of this outbreak; and, although a prosecution for breach of the provisions of the Act cannot be instituted against the dealer, seeing that he did not remove the cattle from Ireland to Scotland until he had obtained permission, still some person or persons are to blame, and these persons, in my opinion, are the local authority of Kells. They are responsible for working the Act, and how have they done it? They have appointed as inspector under the Act a man who knows nothing of the duties and the grave responsibilities he has undertaken; as witness his answers to the following questions:—"How do you know when a bullock is affected with Pleuro-pneumonia?" "Ach, sure, whenever you go into the field, he is the first beast to catch your eye, and he just keeps watching you till you go out." "Do you use the thermometer in making an examination of the animal?" "Sometimes I does." "Just read how this thermometer stands. What does the index register?" "Well, sure, can't say I understands it." "Where would you place the thermometer?" "Under the tail in the cow." "And where in the bull?" "Under the arm." "What is the natural temperature of the cow in the rectum or vagina?" "98°." "What difference would you expect to find in the temperature under the arm and within the rectum?" "30° of difference."

The natural temperature of the ox within the rectum is not 98°, but from 101° to 102°, and the rectum or vagina are the only situations to be relied on in using the instrument in veterinary practice.

The Act requires that for fifty-six days after the date of the slaughter of the last affected animal a weekly return be furnished to the Privy Council as to the condition of the remaining animals of the herd. To comply with this request, the inspector should make a personal and minute inspection of each animal composing the herd every seventh day, but this inspector being only paid for a single inspection in each outbreak of disease, made no weekly inspection in any case; but on the expiry of the fifty-six days, to use his own words, "Just looked in to see how the animals were, as he was passing." Had the animals been subjected to a rigid inspection, the chest auscultated and percussed, the pulse taken, and the temperature registered, undoubtedly some of the cattle would have

been found in an unhealthy condition; and, knowing that Pleuro-pneumonia had existed in the herd, it became the imperative duty of the inspector to have so acted before he let loose the herd on the public.

Now the want of veterinary knowledge displayed by the inspector is not exceptional—it is the rule; because the greater number of the inspectors in Ireland under the Act are non-professional men, and have never had an opportunity of studying veterinary science. Every Poor-Law Union in Ireland is a local authority under the Act, and there may be a dozen local authorities in a single county. You can thus perceive how very difficult it is to work the Act under such circumstances; but, in truth, it is a dead letter in most places in Ireland, and it will continue to be so until the Irish Act is assimilated to that of Scotland, in so far as the appointment of local authorities is concerned, and until there is at least one qualified veterinary inspector appointed to each county and burgh. Last year, as many of you are aware, I spent several weeks in Ireland assisting to draw cordons, and making other regulations for stamping out Foot-and-Mouth Disease; and unless these regulations had been made, and the local authorities of Scotland had closed against the receipt of Irish cattle (until these regulations were made), the disease would have been allowed to go on spreading. So supine are the Irish local authorities, and so unwilling to interfere in the least with the transit of cattle—be they diseased or not—that I am afraid, unless the local authorities in Scotland and England again put the thumbscrew on our Irish friends, we will have frequent importations of Pleuro-pneumonia from that country.

Inspections, however carefully conducted, or, I should say, as carefully conducted at the ports of embarkation and debarkation *as circumstances will permit*, cannot protect us from Pleuro-pneumonia in the stage of incubation; such being the fact, and the inspections under the local authorities in Ireland, as at present conducted, being so utterly valueless and misleading, the Irish Privy Council ought to be memorialized to deal with the subject at once.

And now, in conclusion, permit me to offer a few words of advice to those students who for the first time have taken their seats on these benches. Varied, indeed, must be the feelings and thoughts which possess your minds, and to me they are, of course, unknown; yet, having passed through the same ordeal, and remaining in much still a student, although called a teacher, I fancy that I can read and understand many of your aspirations and some of your disturbing doubts. Time will not permit me to do more than glance at a thought or two which, if not uppermost in the minds of all, will be in those of many placed as you are on the threshold of your studies. What have I to do? How shall I succeed in doing it? And how much I do wish success may crown my labours? These and other such like questions, I know, will find an echo in the bosom of every earnest student now present. All of you, no doubt, have formed some estimate of what you have to do, but the probability is that not one of you has fully estimated the amount of laborious study and mental anxiety you have to endure from the day you enter this College until you leave it in possession of your degree. But, gentlemen, if there be labour, there is also associated with it the pleasure of having acquired the very knowledge we, as it were, thirst for; and if the labour be rightly gone about, we are unconscious of the greatness of the burden, and only now and again feel as if we were, in truth, overweighted.

Many of our physical, and most of our mental pleasures, as you are doubtless well aware, are the results or fruits of a long series of laborious exercises, irksome and distasteful at first, as a rule, to human nature. Accept it then as a fact, that the acquirement of mental knowledge or power, like the acquirement of physical power, is a process of gradual development, and requiring a shorter or longer period of time, according to the constitution of the individual and the previous training to which

he has been subjected. But still alike to all this is a difficult task.

Believe not any one who says that the acquirement of veterinary knowledge, or, for that part of it, any form of knowledge, is easy or intuitive, or that it was so in his case; no such thing, otherwise what he has acquired is of flimsy, superficial character, and therefore more likely to mislead than lead up to right conclusions.

Would you believe any one if he were so foolish as to assert that when a child *you* had no difficulty in acquiring the physical power which enabled you to stand, and thereafter to walk? I am sure you would not. In the same way, and almost to the same extent, I think we may say that we are all in the beginning as mentally helpless as we are physically powerless. It is not much, you would say, to be possessed of the physical power to stand; yet perceive how long, how frequently, how persistently the child fights to gain that command over his body, which will enable him to accomplish the feat, and to what a feeble extent has he at first been successful. And permit me to say that it is only by imitating the child, and his frequent and ceaseless attempts in gaining a physical power, that you will succeed in becoming possessed of that mental power which must be yours, if you are to be successful students of veterinary medicine, and worthy of success. Knowing this, then, it is for you earnestly and sedulously to prosecute your studies; and as much—very much—is demanded of you at the termination of each session, my earnest advice is—lose not a day in buckling on your armour for the battle which must be fought and won before victory is yours. Like the soldier on the march to the distant battlefield, you will find mental obstacles surrounding you on all sides; wearied and distressed, and in the belief that you are making no progress, not a few of you will feel strongly inclined to lay down your arms and quit the service, convinced that you are not mentally equipped for the fight. But nobly have many, possessed of such feelings and forebodings, been fighting, and the timidity thus expressed is the true martial spirit which leads to victory. Afraid of failure is, I think, about the surest guarantee of success.

The student who is continually calling in question his own knowledge, and the ability he possesses of acquiring more (not as some do, calling in question the ability of the teacher who imparts it), has entered on, and is pursuing, his scientific journey—however ignorant he may be of his destination—possessed of the spirit which leads to the acquirement of any and all knowledge. In the spirit I have thus crudely portrayed, I now advise our junior students to take arms in the service of their adopted profession, and to do so this very hour.

Gentlemen, I have read somewhere—and probably so have you—that the first impression may or may not be the most truthful, but that, without doubt, it is the most impressive and lasting; and having a strong belief in the aphorism, I am exceedingly anxious that you rise from these benches with the decided impression that you have been listening to one whose enthusiasm for his profession is only different from your own in this, that it is that of an old student, and yours is that of a young one; that his soul is in his work, that it goes out to the youngest student as to the oldest, and that if you do your duty you have each in me a friend as well as a guide and instructor. Should this be the impression you have this day formed of me and my work, then right glad am I that I have been privileged to make your acquaintance, and no doubt our future meetings will be attended with mutual benefits.

With your previous history some of your parents have made me so far acquainted, and I can observe that not a few of them have left me, believing that they have placed in my charge all that is upright, innocent, and manly; and, gentlemen, I hope that they are correct in the high estimate which they

have formed of their sons. Along with them, I pray that it may please God to send you back to them in health and innocence; and with this desire I earnestly beseech of you to guard your hearts against the temptations to sin so numerous in this large city. Do not idle your time promenading the streets, or those so-called places of amusement; and do keep the hours and the customs you have been taught to keep and respect under your father's roof. Be punctual, diligent, and persevering in the discharge of every duty; and remember that, while I am responsible for order and regularity in every department within the College, I have no authority beyond it, and to you is entrusted its fame as an educational institution. Strive, then, to maintain your position in life; be earnest, honourable, and straightforward; cultivate habits of sobriety and truth; cherish respect for yourselves in all places, at all times; and do not forget your duty to your college confrères—your obligations to your fellow-men—

What matter tho' at different times,
Our fathers won the sod;
What matter tho' at different shrines
We kneel before one God;
In fortune and in fame we're bound,
In stronger links than steel,
And neither can be safe nor sound
But in the other's weal.

DR. RUSSELL said:—Gentlemen, I had very great pleasure in taking the chair on the present occasion. Your Principal is a personal friend of my own. We are fellow-servants of the public, and the subjects to which we have devoted our lives are very intimately related. I have listened, as you all have, to this introductory lecture with very great interest; so much so, that it is only on looking at my watch that I discover the time has so far passed that it will not be proper to trespass upon your patience with any detailed remarks. As to the first part of the Principal's address, I do not feel myself competent to enter or pass an opinion upon; but it is quite evident to me that the questions which disturb the medical profession, as to the examinations and courses of study, are exactly similar to those questions which disturb your minds. And criticising the opinions expressed by your Principal in the light of common sense, they certainly appeal to me as being just; and I could observe by your frequent applause that they were certainly popular with you. (Applause.) The other portion of the Principal's lecture is one on which I can speak better, and the results of the administration of the Contagious Diseases (Animals) Act in the City of Glasgow are certainly extremely gratifying, and ought to go far to justify a perseverance in the same course which has led to such excellent results. I observe that the Principal, with his natural modesty, spoke of these results having been achieved by the local authority; but I, as a citizen of Glasgow, and a close observer of the operations carried out by the Local Authority under the Contagious Diseases (Animals) Act in Glasgow, am free to say that it would be no excess of fact to attribute the excellence of this result almost entirely to the Principal himself. (Applause.) I cannot forget that Principal M'Call does not confine the execution of his duties under this Act altogether as if he were consulting his own ease and comfort. He requires the enthusiastic support of the public, and an appreciation of his services, in order to sustain him in meeting and overcoming any pertinacious obstruction, and even virulent criticism, which a faithful servant will very often meet with from those upon whose privileges he is trespassing. I think the least thing we can do is to give a very hearty vote of thanks to the Principal for his address. (Loud applause.)

XUM

ROYAL (DICK'S) VETERINARY COLLEGE, EDINBURGH.

Opening of the Session.

THE introductory lecture to the winter session at this institution was delivered on Wednesday, the 29th October, by Dr. James. There was a good attendance of students. Bailie Hall, in the unavoidable absence of the Lord Provost, presided, and there were also present—Councillors Drybrough, Macdougald, M'Intosh, and Robertson; Colonel Gillon, of Wallhouse; the Town Clerk (Mr. Skinner); Deputy Town Clerk (Mr. Harris); City Chamberlain (Mr. Adam); Dr. Ferguson, Edinburgh Institution; Dr. Imlach, late President of the College of Surgeons; Dr. Gibb; and the following veterinary surgeons—Messrs. Rutherford, Edinburgh; Aitken, sen., Edinburgh; Borthwick, Kirkliston; Thompson, A.V.D., Scots Greys; Galloway, Perth; Calvert, Middleham; Prentice, Veterinary Department, Privy Council, Ireland, etc.

The CHAIRMAN, in the course of some introductory remarks, spoke of the College as second to none in the kingdom, and expressed his conviction that so long as it possessed such a staff as the present they need not fear for its future success.

Dr. JAMES then delivered the following address:—

Mr. Chairman and Gentlemen,—In addressing you for the first time at the commencement of another year, my first duty is as plain as it is pleasant. It is simply to offer you all a hearty welcome to our College. To those of you who have already done work within its walls I will express the hope that you return refreshed and invigorated for further study. To those of you who are here for the first time I would, with the same good wishes, offer my congratulations on your having determined to follow the profession of medicine. Our profession is one which is excelled by no other in directly furthering the wellbeing and happiness of the community, and it is peculiarly alone in that it affords material of a nature especially likely to enlarge the intellect, broaden the sympathies, and elevate all who enter upon its study. Our profession is not one which is likely to be chosen by those whose ambition in life is the attainment of public renown or the amassing of great wealth; but it is certainly one which will afford something far better, viz., happiness, and one which teaches us philosophically to put at their proper value such objects of ambition as titles, renown, and great wealth, at the same time enabling us, if we conscientiously use the energies which Providence has given us, to obtain as much as is good for us to desire of each. Let me therefore again offer my congratulations to those of you who begin medical study, with the surety that, as years roll over your heads, your appreciation of it will ever tend to rise.

But now, gentlemen, it is usual for one of your teachers who has the honour of giving the inaugural address to discuss with you some topic of interest. I propose now to do this, but I must, in the first place, confess that I have had some difficulty in finding for this a suitable subject. This is not from any lack of such; our profession always presents enough of interesting and instructive material, but it is due to the fact that, as it is my bounden duty to make myself comprehensible to you all, I must endeavour to select some topic which those of you who are just beginning in the profession are able to understand. Just as the speed of a fleet is regulated by that of the slowest vessels composing it, so must I confine my remarks within the limits of comprehension of those who are as yet practically ignorant of medical knowledge. My choice is therefore somewhat limited. Let me, however, do my best in the choice, and make a beginning.

You all know that there have existed men who are commonly and justly called the fathers of medicine. Of such men Hippocrates, Galen, Æsculapius,

etc., are examples. They lived many hundreds of years ago. They practised with success, they founded schools, and wrote works which are still regarded with respect, admiration, and even veneration. Well, now, suppose that any one of these great and good men were suddenly to revisit this world, and were desirous of again engaging in medical practice, he would, of course, have to obtain a diploma—*i.e.*, he would have to pass the examinations. Would he be likely to pass? Certainly not. He would certainly fail. And although we may not consider the Examining Boards of the present day to be perfect, we should have to allow that in this case they had acted rightly, and that the rejection was just. In order to demonstrate how the great physicians of antiquity would infallibly fail in the profession at the present day, Dr. George Balfour, in an introductory lecture which he delivered at the opening of the Edinburgh Medical School some years ago, described a supposed visit of one of them (Hippocrates) to the Edinburgh Royal Infirmary. I should like to give you this description in full, but inasmuch as were I to do so I should be taking up more of your time than is absolutely necessary, I shall merely give you a *résume.*

Dr. Balfour pictures him going up the main staircase of the infirmary into one of the wards, and there, in the presence of the physicians and students, enunciating some of his views on disease. He depicts the surprise with which he looks at certain chemical manipulations, the amazement with which he regards the resulting reactions, and the feeling of discomfiture which he experiences when he is asked which of the sugar-tests he prefers. Finally, Dr. Balfour describes the physician, after showing him a good example of the cracked-pot sound, as handing him a stethoscope to listen to a good example of broncophony. To use now Dr. Balfour's own words :—"The word has a Greek ring about it, and thinking he may understand it better with the instrument in his hand, Hippocrates takes it, and, uncertain what to do with it, looks first at it, and then through it; considers whether he should listen to it as to the moaning of the sea in a shell, or whether the sound is to be produced by blowing through it as a trumpet, and utterly bewildered by all he has heard and seen, suddenly recollects an important engagement in Thessaly, and, with many thanks, returns the wonderful but unknown instrument, and departs a sadder if not a wiser man, fully conscious that if called upon to pass a clinical examination of to-day he, the great clinicist of antiquity, would infallibly be found wanting."

So much for progress in the infirmary. Let us, however, follow him further. Discomfited by the poor appearance which he has made here, but unwilling altogether to confess himself beaten, let us suppose that he determines to find out if he cannot make a better appearance in another establishment, and let us suppose that he pays us a visit in the Royal Dick Veterinary College. He had studied diseases among animals, and he is conscious that the treatise which he wrote on equine disorders is known at the present day. He comes to us here, therefore, trusting to do better. He is, of course, courteously received. He is shown through the dissecting-room and museums, where, as comparatively few words have to be exchanged between him and his hosts, he begins to feel again somewhat at ease. It is only for a moment, however. On a table are displayed an array of microscopes, and although he previously had been afraid of exposing his ignorance by examining them, his curiosity now gets the better of his discretion, and, following the example of his hosts, he looks through them. Here he is again dumbfounded; a section of bone, with its lacunæ and canaliculi, appears to him like nothing else than an army of spiders, a drop of blood more like a lot of peas than anything else he knows of; and when he views the magnified head of the cysticercus, with its suckers and double row of hooks, he starts back in fear of bodily harm.

Politely appearing not to have observed his expression of amazement and trepidation, we begin to ask him a few questions, and the microscope being present in our minds, our questions are made in connection with them. We ask him if he is in the habit of using the immersion lens, or what staining fluid he prefers to demonstrate the bacillus of tubercle? To such questions he, as formerly, has recourse to feigning a little deafness; and when we further endeavour to discover his views on Chicken Cholera, or on the attenuation of the virus of Hydrophobia, he quite collapses. He again recollects his important engagement in Greece, and hurries off, more than ever conscious that for him to attempt to pass through the portals of the profession to-day would be the courting of a decisive and ignominious defeat. But now let us follow him still further. We will suppose the utterly bewildered old gentleman, in order to avoid the public gaze, slowly wending his way along Clyde Street. So confounded is he at what he has seen and heard, that he at first cannot even think. By the time, however, that he has reached Elder Street, he is so far recovered that he is able to meditate, and as he slowly paces along Swinton Row he begins to realise the tremendous advances which medical science has made in this globe since he was one of its inhabitants. "Why," cogitates he, "physicians must nowadays be able to cure every disease; pain and suffering must be at an end in the world, and, of course, death in men and animals must be a most infrequent occurrence." But just at this moment he emerges into the somewhat open piece of ground at the east end of Swinton Row, and he is brought to a sudden stop; for an array of sombre-looking vehicles, drawn by as sombre-looking specimens of the equine race, meets his gaze. Instinct tells him what this means, that he has come upon an establishment, the function of which is the due disposal of the dead. "So, so!" he thinks to himself, "people must still die;" and as he discovers the large number of the vehicles, "they must die, too, in quantities." Moreover, that "doctors can't prevent them dying at inconvenient hours," is what he concludes, as he sees the words, "Night-bell," written conspicuously on a sign-board. A grim smile now crosses his countenance, and he determines, before going back to Greece, that he will make some inquiries as to the mortality of the present day. What he finds out certainly surprises him. He learns from the books and periodicals that the mortality apparently has not diminished, for probably in the same column of a daily paper he learns that in one part of world hundreds of human beings are dying of Cholera, and in another hundreds of cattle have had to be slaughtered for disease. He discovers, also, that scientific opinion as to the causation of disease is anything but settled. On the one hand, he finds certain scientific men upholding the view that the bacillus is the sole cause of Tubercular Disease, and on the other, equally credible witnesses testifying that it is almost absolutely guiltless of producing such dire results. In the medical journal of one week he finds that the fountain and origin of Cholera, the comma bacillus, has been detected by the observer, and in that of the next he finds that another distinguished observer, in order to put the matter right, has had a dish of comma bacillus for breakfast and is not a bit the worse. He cannot but admire the cool intrepidity in the cause of science of such an individual and of those who have declared themselves willing to test upon themselves the efficacy of the inoculation of the attenuated virus of Rabies; but all this he considers simply shows that our advance in the healing art is more apparent than real, and that though he is ignorant of the scientific appliances of the present day, yet his practical work—*i.e.*, the curing of disease—was about as far advanced twenty-three years ago as it is now.

Now, gentlemen, these are the questions which I wished to illustrate. They are ones which you will often hear stated, which you will feel bound to criticise, and ones which at the beginning of your medical studies may appro-

priately be considered. They are (1) that medical science has made tremendous progress since the time of the so-called fathers of medicine, and yet (2) it has really been asserted that the practice of to-day has made no corresponding advance.

Let us consider the first question first. How is it that the old physicians were so ignorant of the phenomena of disease? It was simply because they were almost entirely ignorant of the properties and functions of the body in health. But you will again ask, Why was their acquaintance with the functions and properties of the body so slight? It was not because they were deficient in brain-power. As far as this is concerned, it is acknowledged that they were in no way our inferiors, and in sculpture, poetry, and philosophy they have given abundant evidence of this. How then was it? The answer is that they were almost absolutely devoid of the physical means necessary for investigation. They could examine the outside of a patient during life and the inside after death, but all the information gained was merely that which could be obtained by the unaided senses. How different from now. By our knowledge of optics we can construct instruments which enable us to see clearly objects hundreds and thousands of times too minute for the naked eye. By chemistry we have means of testing the composition of bodies, infinitely more delicate than the old physicians ever dreamed of, and our knowledge of heat, light, and electricity gives us an insight into the functions of the body which is as clear as that of the fathers of medicine was the reverse.

Thus, then, for our more thorough acquaintance with the properties and functions of the body, we are indebted to the sciences—physics, chemistry, etc.; and if we could at present enter into this subject more fully, we should find that, as our acquaintance with the latter has increased, our knowledge of the former has correspondingly advanced.

But now let us see what can be said to the second question. Has the practical aspect of the profession made corresponding progress? This can be simply answered. In the year 1530 the average longevity was 21·21 years, whilst between 1814 and 1833 it was 40·68 years, *i.e.*, as large a number of people now live to seventy years as lived to forty years 300 years ago. Now, this means progress, not only in relation to man, but in all that concerns humanity; it means a corresponding advance in our knowledge of how best to deal with all those creatures upon which the welfare of man is so intimately dependent.

And now, gentlemen, that we understand that medical science has advanced, and that *pari passu* with this advance there has been a gradual amelioration in the condition of humanity, are there any practical deductions to be drawn from these considerations? There are, indeed, many; but perhaps the chief of these is that, inasmuch as we succeed to an inheritance of scientific knowledge, precious to us as being a great source of the health and happiness we enjoy, it is our bounden duty so to use our energies as to make full use of that knowledge, and also so to act as to transmit it improved to those who succeed us. We should remember that the fact of our being placed in circumstances in every way immensely superior to those which our forefathers occupied, whilst it increases our comforts, increases also our responsibilities. We work, as it were, upon capital which has gradually accumulated as the result of hundreds of years of patient labour, and we must not be content with simply gathering in the interest, but remember that it is our simple duty to do as we have been done by.

It is to us all a matter of the most sincere gratification that we have only to look around to discover that we are still associated with men who have well borne the trust which they inherited. Of this the College in which we now stand is a noble example. It is an institution which owes its origin to no act of Royal favour, to no enactment of a commission appointed by Par-

liament, but to the honest work and unflagging energy of one who did his duty to his fellows, who, recognising that science must be progressive, endeavoured so to act as to render it better in the world when he left than when he entered it. He was one who had a real influence on his fellows; he could comprehend what the times required of them and put them in action. As a representative of the period in which he lived he was the *best;* he was essentially a great man.

Moreover, in connection with the debt which medical science owes to William Dick, there is another aspect to which I wish for a few moments to advert. In this age, in which the subject of education is occupying such a prominent position—in which it is regarded as the panacea for all the ills that flesh is heir to—we are, of course, fully alive to the value of establishments endowed for the purpose of conferring its benefits. But we are, I think, rather inclined to be oblivious of the fact that educational institutions themselves require to be educated. There is no doubt that where a number of men are set apart from their fellows to impart instruction in several branches, there becomes developed in them a tendency to insist too much upon the value of special knowledge. The professors and teachers in such institutions are, of course, appointed for special subjects, and it is well that this should be so; but this, like everything else in this imperfect world of ours, has the drawback in that it is apt to lead them to look at everything through too narrow an aperture. They know that there are certain grooves along which minds have to be trained to run; they are apt to make the grooves so deep that they can see nothing on either side. On this point Comte says, "The specialising system is apt to result in a sort of academic idiotcy;" and again, "The academic system narrows the mind and blights the imagination, but its tendency to dwarf the sympathies and degrade the character is still more certain." This is very strong language, but though we need not go so far as Comte has done, we must acknowledge that there is in it a certain amount of truth. Now, I think we must congratulate ourselves with the issues, that in our College this danger is reduced to a minimum, and for this again we have to thank the consideration and foresight of William Dick. Through our organic connection with the Town Council of Edinburgh, we may rest assured that the work done by our College will advance with the times. We know that the work is being jealously regarded by men who recognise that science must be progressive, and whose training and occupations tend to enable them to view the interests of the College from a wider standpoint than that occupied by those who labour solely within its walls. With a perfect understanding between the College and the Council, we, in the former, need have fear neither for the College nor for science in the future; and I have no hesitation in stating my conviction that it would be better for medical science in this city if this influence of its Town Council could be further extended.

Whilst on the subject of medical education, there is another matter which I think should be mentioned, as it intimately concerns all of us. You know that the Royal College of Veterinary Surgeons makes it a rule that no teacher should be an examiner. That this is a wise rule, in that it obviates the risk of a teacher examining his own pupils, we must all express our unqualified satisfaction. But it has the drawback in that it cuts out entirely from the Examining Board men who are best qualified to examine, men whose business it is to keep ahead of science, to know what students should know, and to detect in what they lack. Of course, it is easier to point out a fault than to procure a remedy; but with this modified, and with written exercises, we should have equality as nearly as it can be got.

In conclusion, gentlemen, you are entitled to expect that I should offer you some words of practical advice. Well, on this I shall be brief.

First, as regards your conduct to yourselves and to your fellows, I say absolutely nothing, as this is a matter for personal influence, and cannot be imparted by words. You all know the saying, "Example is better than precept." I should almost be inclined to say precept had better be left out altogether; for precept with example is useless, and precept without example is ten thousand times worse than useless. I, therefore, let this alone.

There are, however, some points connected with your every-day life in which one who has passed through the mill may be able to offer counsel.

In the first place, let me advise you all to be methodical. Have regular hours for work, and regular hours for rest. I do not say have long hours for work; with regular hours you are far more likely to succeed.

Secondly, as students, work up each subject equally. You will, doubtless, often find one more captivating than another, and will, therefore, be inclined to devote attention to it, to the neglect of the rest; or you may find a subject so devoid of interest that you would rather avoid it altogether. Avoid this. You will have plenty of time to specialise by-and-by.

Lastly, take care of your health. Remember that without it little or nothing can be done. He who neglects his health may, as Johnson puts it, be justly represented, not only as a spendthrift of his own happiness, but as a robber of the public. Let your motto be "*Mens sana in corpore sano*," and you can look upon the future with confidence.

On the motion of the CHAIRMAN, a hearty vote of thanks was accorded to Dr. James for his address.

Principal WALLEY then made a few remarks in reference to the connection which existed between the College, the Town Council of Edinburgh, and the Highland Society of Scotland. He said that he was very sorry to see, some time ago, a statement made at one of the veterinary medical associations, by a gentleman who had been placed in a position on the Examining Board of the Royal College of Veterinary Surgeons, which called in question the right of the municipal bodies of Edinburgh and Glasgow, as also the Highland Society, to interfere with any action the Royal College of Veterinary Surgeons might see fit to take in connection with veterinary education. It would, he thought, have been quite as well if this gentleman referred to had taken a little trouble to make himself acquainted with the history of the connection of these three influential bodies with the profession before giving utterance to such remarks. In reference to the Edinburgh Corporation, it was a matter of common notoriety that there existed between them and this school the closest possible connection, seeing that they were the trustees under the late Professor Dick's will, that Professor Dick himself had been during his life a member of the Town Council, and that that body had always taken a deep interest in the advancement and welfare, not only of the veterinary and medical professions, but of all professions and sciences which were of use to the world at large. The Glasgow Corporation had showed the same desire to assist the profession, and had also exhibited an earnest desire for the advancement of education generally. As to the Highland Society, its connection with educational matters dated back exactly one hundred years, at which time it was established, not as an agricultural, but as an educational body, and for the purpose of improving the condition of the inhabitants of the Scottish Highlands in particular. Some years elapsed before it took up the position of an agricultural body, and it was not until 1831 that its showed its regard for the veterinary profession, when it assisted Professor Dick to place the profession in an honourable position in this country, and since that time it had done more to encourage veterinary science than any other body in the United Kingdom, and even now it extended the hand of encouragement to the veterinary students of this country. Surely these facts were sufficient to

establish the right of the three bodies mentioned to keep a jealous and watchful eye upon the doings of the Royal College of Veterinary Surgeons, and to come forward when they thought that matters were being carried too far, and utter a word of protest. When they took into consideration the extent of the curriculum and the large expenditure required in order to obtain the diploma, they would see that it would be a great hardship to increase the burdens put upon students, and to further handicap the good men who came forward from districts in which their brethren were perforce content to live in huts such as a lowland cotter would despise, and who could never expect to make anything more than a miserable pittance (often inferior to the pay of a third-rate clerk) by the practice of the profession.

The PRINCIPAL then went on to say, in regard to the action of the Royal College of Veterinary Surgeons, that when up till last year there were only two representatives of Scotland in the Council of that College, and at present only one man residing in Scotland who was a member of the Examining Board, he thought it was pretty plain that justice had scarcely been done to Scotland in this respect. An attempt had been made—and so far had been partially successful—to remedy this state of things. During the last year not only had Professor Williams and himself occupied positions on the Council, but Professor M'Call, of Glasgow, had been added, and he was proud to say their friend, Mr. John Borthwick, had been put on as Vice-President. More than that, the other day a resolution was passed by the Council of the Royal College that the Examining Board should be enlarged, and he was happy to tell them that Mr. Borthwick was chosen as an examiner. (Applause.) Another item of news was that a syllabus was to be drawn up by the examiners, so that students should know what they were going to be examined upon at each table. (Applause.) They had also got a slight alteration in the students' marks, which would perhaps assist them a little. As to the accommodation of the Royal College, it had in the past occupied an ordinary dwelling-house ; but at the last meeting of the Council it was agreed to erect a building. The site was purchased, a good deal of the necessary money obtained, and he hoped before long there would be a Royal College of Veterinary Surgeons worthy of the profession. (Applause.)

Colonel GILLON said he was delighted to see so many students present, and when he looked back to the time, now thirty-seven years ago, when he first remembered the College, he saw a great improvement, not only in the numbers, but in the condition and the appearance of students. (Applause.) An effort was made some years ago, with the aid of the Duke of Buccleuch, to get a Veterinary College for Scotland alone, separate from London. Whether many agreed with him in that he knew not, but the Highland Society made that determined effort, and if they were backed up, he thought they would make another. (Applause.)

On the motion of Councillor DRYBROUGH, a vote of thanks was tendered to Principal Walley and the other professors ; and with similar compliments to the Chairman, proposed to Dr. AITKEN, and to the strangers, by Principal WALLEY, the proceedings terminated.

NEW VETERINARY COLLEGE, EDINBURGH.

THE session of this school commenced on October 22nd, and there were present—Messrs. Connochie, V.S., Selkirk; Aitken, V.S., Dalkeith; Thomson, A.V.D., Piershill Barracks ; R. Rutherford, V.S., Edinburgh ; Baird, V.S., Royal Veterinary College, Edinburgh; Brock, V.S., Glasgow; Borthwick, V.S., Kirkliston; Chalmers, V.S.; Fenton, A.V.D.; Hodgkins, V.S.; Woodhead, M.D.; Faulkner, V.S., Manchester ; Reid, V.S., Leith ; Durkie, V.S., Dundee, etc.

Principal Williams was in the chair, and the introductory address was

delivered by W. I. Macadam, Professor of Chemistry and Toxicology. It was as follows :—

Principal Williams, Ladies and Gentlemen,—It is not without considerable misgiving that I trust myself to deliver the Inaugural Address of this the second year of our meeting in these College buildings.

As you are well aware—and your presence here denotes the fact that you are aware—the New Veterinary College of Edinburgh, one of two colleges in our city, and one of the three Scotch Schools of Veterinary Medicine, owes its origin to the indomitable pluck (I can use no other word) and honest hard work of our Principal, Professor Williams. It is useless for me, gentlemen, to waste your time in vainly attempting to recount the various battles he has had to wage before the magnificent pile of buildings in which you now study was reared ; suffice it to say, that these walls and these rooms are a fitting monument to their author, and well I know he desires no better.

In a word then, I, in the name of the Principal and professors of the New Veterinary College of Edinburgh, welcome you to your studies, and assure you that previous success will in no wise loosen the bonds of our labour, but rather stimulate to things still greater.

To those amongst you who return after a brief breathing space to your books, we wish all good luck in the coming session. It is for you to show the way to your younger brethren, and by your hard work and close attention to duty, to assure yourselves the successes in store for you at the examination tables.

To those who appear on these benches for the first time, I extend the hand of welcome. You have done well in choosing such a profession, the most noble of all professions, the profession of healing. Do not be led away by the idea, too often entertained, that it is possible to play during the session, and have recourse afterwards to "grinding." Such knowledge is shallow and worthless. Pass your examinations you may, but the after-result, in which the public is the jury, will show the honest hard worker far aloft, and pulling hard up the ladder of fame and fortune, and the "grinder" painfully losing his feet amongst the lower rungs. In a word, then, success depends on honest hard work.

The subject in your professional training which I personally represent, namely, chemistry, coupled with the detection of poisons, or toxicology, is usually looked upon by the student as an "extra" subject necessary for the first examination, and not unfrequently treated as such only. Now, is this the case? Does not a thorough knowledge of chemistry aid the student in his other subjects? Is not chemistry—pardon me if I claim too much—the foundation on which your other subjects are reared—a pure science built on lines fixed and firm, a science which starts with simple and, at present at least, indivisible portions of matter termed elements, and with laws by means of which more and more complex bodies are built up, until substances are formed which not unfrequently are found to be equal in all respects to those produced by living matter—a science which, starting with elementary bodies, only stops short and fails when called upon to produce organised living matter, or life itself? A knowledge of chemistry then, I maintain, is the very best foundation on which to build your other studies, and on that account is properly placed amongst those subjects with which you are called upon to show your acquaintance before passing to medicine and surgery.

In the very short time placed at the disposal of the science, it is impossible to master more than the framework or bones of the subject, and necessarily such elementary knowledge should form the essence of the professional examination. In entering on this aspect of the subject I do so with all respect to the powers that be, to the Council of the Royal College of Veterinary Surgeons, and to their painstaking and efficient staff of examiners,

and to none greater respect and personal goodwill than to the examiner on my own subject.

As you are all aware, the subject of examinations is possibly one of the most burning at present before the profession. The attention of all has been directed to the subject by the results of last season's "final" examinations, during which a much larger proportion of the candidates failed than had ever before been the case. Now, what was this due to? Was it to less careful and efficient tuition in the schools, or is it the fault of the examiner, or are the tests pitched so high that the average student cannot come up to their requirements? First, then, is it the fault of the teacher? In answering this question we will require to look at the results of the examinations, not of men, but of schools. Now, in the four colleges in Great Britain the same rule applies, namely, that the proportion of failures last season was greater than in previous years. This, then, does not look as if the teacher was to blame. As for the students, I can safely say that they are at least equal to the candidates for medical and other science degrees, and that the results of the class examinations held during past sessions will compare most favourably with those of the medical classes. The student is, therefore, not below the average of young men intellectually.

Now, in studying the subject from the various lights in which it is presented in the journals devoted to veterinary medicine, I find it stated on high authority that it is due to the most laudable desire on the part of the Royal College to make the requirements more stringent, and, therefore, the diploma more valuable. In this we as teachers shall in all ways aid. But is there not a possibility of rendering the standard too high, of demanding too intimate a knowledge of a science, or of its applications to other sciences, or branches of the same science? Take chemistry—fluorine is one of the elementary or simple bodies; it is a substance with such energetic properties that chemists have no certain knowledge that it has ever been isolated. It is presumed to be a gaseous body with corrosive action on glass or other siliceous compounds, and forms certain salts with the metals, one of which, the calcium fluoride, is present in bone. The teacher might lecture for some days on the subject, but would require to summarise all at the close by saying that the body was one of which we knew very little certainly, although a good deal might safely be deduced as to the properties, etc. Under the present system this element may crop up from time to time. The alkaloids are a class of complex organic bodies comprising many of our most powerful drugs and poisons. They are a large class, but comparatively few are important. Whilst strychnine, morphine, quinine, etc., may fairly be considered, other and more rare members of the series should not be examined upon.

These illustrations will go a long way to prove that the tendency of the examinations is to demand too high a standard of proficiency, too extensive a knowledge of each particular science—in fact, to demand from the student what is not called for in the examiner, a knowledge almost perfect in all his subjects. I am well aware that the particular examination to which my science belongs is not a "deadly" one. Still we know that what appears in the first examination is to a still greater extent present in the second, and is almost fatal in the final. Now, how is this difficulty to be overcome? How is the student to be brought up to the present high requirements of the Royal College of Veterinary Surgeons? The question seems a hopeless one so long as the subjects remain so wide. Last session I drafted a letter to the Royal College, in which I proposed the publication of a syllabus in which would be detailed the points considered to be of greatest importance to the profession. This letter has not as yet been forwarded, as I am desirous of carrying with me the whole body of examiners and teachers, or at least a large proportion of such. Those of the examiners and professors who have seen it have agreed

with its contents, and will support what it suggests. I am not altogether without hope that the scheme may bear fruit, and I feel confident that the result will show not only a larger number of "passes," but a more intelligent grasp of the subject by the students. The idea is no new one; it is an accomplished fact with the medical licensing boards of the country, and is bound to work well. At present a student, so far as the actual law goes, may be examined on the constitution of the most complex organic bodies, or the analysis of a simple salt. With a defined syllabus the teacher requires to bring his men to a certain point. At present we know not where we may be taken. In fact, as the subjects now stand, the teaching body are required to watch the peculiarities of the examiner, instead of following a steadfast, I might almost say, honest course of study.

Now, a good deal has been said as to the "Scotch" colleges, and a good many threats have been made on both sides, but we must remember that what we work for is not only the benefit of our College, but the improvement of the profession. Can such be accomplished by either party separately? I doubt it, believing as I do that the interests of the colleges are bound up in the well-being of the Royal College. Can such well-being be promoted by such a declaration as that reported in a late number of a veterinary journal to have been made by a member of the Examining Board, that "half of the students that come up for examination should be rejected, and the other half kicked out of the profession"? Is this true? Are our men so inferior that they either do not deserve to pass, or should receive such summary treatment as this examiner suggests? We, the teachers who know you, who personally come in contact with you, and who watch your daily progress—answer for you, and declare the statement unsound in fact, and unsupported by evidence.

But grant the statement true, you have here an examiner who, on his own word, has regularly allowed men to pass who should either have been "rejected" or "kicked out." Is not this a somewhat strong argument for the theory that reform is needed elsewhere than with the students? No wonder that so many of our promising men are found amongst the "duffers" and "chronics" in the rejected list, if this is the belief with which our examiners are to receive them. But, gentlemen, we know that whatever the statement of this particular examiner, it is not supported by his colleagues. They may come with ideas of perfection or standards fixed for them, but they come to carry out their work honestly and fairly. No one can enter the examination room without being convinced of this fact.

I have taken up already too much of your time, and must leave the discussion of other and as interesting subjects for some fitting opportunity. Amongst such subjects is the constitution of the Council of the Royal College, which might fairly be more representative of Scotland, and of the teaching staff of her colleges. Bear in mind that at present three out of four colleges are Scotch, and that, therefore, if the professors and students are to be properly represented, and if legislation on teaching is to be carried out, a greater number of the Council should be North-country men. I am not advocating a separate Charter for Scotland, believing, as I do, that if union can be maintained it is best for all that it exist; but if the present lines are continued, and the teaching staff and North-country men ignored, the time may come when the challenge contained in a late number of one of the veterinary journals shall be accepted, and a separate diploma-giving body be established north of the Tweed. The material necessary for its formation already exists, and I have no doubt that, with the experience of the past three and a half years, a more perfect system might be inaugurated than has yet existed in the past or now exists. I can only express the wish that a little more tolerance and forbearance may be shown on both sides, and the present wounds healed whilst life remains.

Your profession has improved much of late. This year the Veterinary Surgeons Act came in force, and will do much to raise your status.

Your College during the past year has increased in numbers, and a further addition is assured for the present session.

Our men, taking the tests as they are, and considered with the passes from the other colleges, have done well at the examinations.

Mr. A. J. Haslam has carried the third of the prizes given by General Sir Frederick Fitzwygram, and which are open to the students of all the colleges. The marks awarded him for his written examinations were 861, which placed him first on the list with 53 on the right side. At the practical, however, he was third on the list, being 125 marks below the first prizeman, and 60 below the second man. The total marks in both practical and written were—

1st, 1563. 2nd, 1498. 3rd, 1491.

In other words, Mr. Haslam was 72 marks below the first prizeman, and 7 below the second. I doubt not that had Haslam received the intimation of the examination sooner than he did he would have given a still better account of himself.

Again, gentlemen, I wish you good speed in the coming session, and assure you, one and all, of our best endeavours on your behalf, and ask in return your goodwill and honest hard work. With such a combination we need fear neither work nor examination, and will most certainly leave at the close of our session a goodly record.

MONTREAL VETERINARY COLLEGE.

THE opening lecture of the winter session of the Montreal Veterinary College was delivered on October 7th, by Dr. McEachran. The attendance was large, and the greatest interest manifested in the proceedings. The chair was occupied by Sir William Dawson. Dr. McEachran said :—

GENTLEMEN,—I need not attempt to disguise the feelings of pleasure with which I meet you this evening. When I compare this bright, intelligent assemblage of students before me with the small beginnings of eighteen years ago, I can well feel proud that I did not yield before the many discouragements which had to be surmounted. Gentlemen from the Province of Quebec, from Ontario, from different parts of the United States, from the West Indies, from England, and from distant Japan now fill our benches, so that we may infer that we are known abroad, and that the reputation of the school is such as to merit the confidence of others besides our own people. Why is this the case? Chiefly on account of two great names which honour our prospectus. Of the one, it needs no eulogium from me. Our Sovereign Lady the Queen, in acknowledgment of his great services in science and education, has but recently conferred the honour of knighthood on him. I refer to the distinguished Principal of McGill University, Sir William Dawson. The other is one not yet so well known, but like him a scientist by nature ; he, perhaps, was not born with a microscope in his hands, but at a very tender age he showed, when a student with the late Dr. Borel, an extraordinary aptitude for histological and pathological investigation ; even when a mere boy his predilection for *post-mortems* was strongly manifested. Having enjoyed the advantages of the teachings of Virchow, while a student in Germany, he was well fitted for the Chair of Institutes of Medicine in McGill University, which he has so ably filled for years. It is with no little feeling of regret that I am obliged to inform you to-night that we have in the meantime lost him. I am sure that those of you who know him feel like myself that our guide and leader is gone ; for while he belonged more particularly to the medical school, I doubt very much if his leanings were not with the veterinary branch of medical science, as

affording him better opportunities of prosecuting his researches in pathological anatomy. Well, in the meantime, he is about to leave us, and we trust he will be happy and prosperous in his new sphere; but I would feel sorry indeed if I supposed he would not come back to us. Canada cannot afford to lose such men, and had the value of such a scientist been but known to the country, he would never have been allowed to be taken from us. Osler is the Pasteur of Canada—the pathological investigator who has stimulated medical science, and led the way to every advance in pathological research. It cannot be that the country will let him be lost to us. Do we not want him in the public employment in connection with the quarantine services, medical and veterinary, as consulting pathologist for the Dominion? It is a new position, but, nevertheless, one of the most vital importance; and in making such an appointment Canada would be but honouring herself and taking a progressive step which would be greatly in the interests of public health.

It is usual on such occasions as this to enter somewhat in detail into explanations of the numerous studies which form the curriculum of your educational course. I hope you will excuse me to-night if I depart from that custom and, instead, try to impress you with the higher aims and objects of the profession which you are now entering as students.

The Progress of Veterinary Science.

Veterinary science is no longer the simple art of the farrier, whose knowledge consists of a few nostrums and the practice of a rude form of surgery; it is, in fact, a science, embracing within its scope the whole of the collateral sciences which are included in the curriculum of the foremost medical colleges. For the successful prosecution of its study there is required a combination of qualities such as are not needed in any other of the scientific professions, viz., a well-cultivated mind, a studious habit, and constant application, and in addition, you require physique, courage, and tact to enable you to control your patients. It has been remarked that the tendency in the schools of the present day is to devote too much to the purely scientific, and too little to the practical application of the science. This is no doubt to a certain extent true, but it is due to the fact that the time devoted to the study by the pupil is far too limited for him to accomplish both the scientific and practical together, and it must come to it that, like the medical students, veterinary graduates must spend both time and money in visiting those hospitals where large numbers of animals are being healed, not in hurried moments between hours of study, but leisurely, and when they have nothing else to do. There is no profession that has made such progressive strides as has this one. In fifty years, from the rude art of the farrier it has risen to a science which forms no small part in the progress of nations, from the fact that it is the handmaid of agriculture, which is the backbone of national prosperity. You will thus see that you are entering on the study of a science which affords ample field for your ambition and abilities, be they what they may.

A nation becomes great in proportion to the advancement of her agriculture, especially that branch of agriculture devoted to stock-raising. The mere production of grain seldom results in making a country great or wealthy. It is a well-known fact that on this continent, at least, the live-stock of both the United States and Canada has formed a very important part of their agricultural greatness, and represents no small portion of the countries' wealth; and it behoves every country and government to promote the veterinary science as much as possible, so that they may enjoy the full advantages it is capable of bestowing in the prevention of contagious diseases.

The lecturer then treated at some length of the result of ignoring the warning voice of the profession in England half a century ago, traced the progress of disease in the Eastern States, and its introduction in the western

parts of the United States, and pointed out the efforts made by members of the veterinary profession to arouse the American Government to a sense of the danger of the disease, and continued :—

Why Pleuro-pneumonia has Spread.

How, then, comes it that this fell plague has been allowed to make its slow but certain progress westward? Simply this—gigantic railroad enterprises have, at an enormous cost in money, covered the United States as an iron network, and in many instances the bulk of their earnings is derived from the live-stock trade ; besides, wealthy corporations are organised and net large profits from stock-yards. Any hindrance, such as quarantine regulations properly enforced would necessarily produce, was consequently opposed by such corporations, and thus the fight went on ; the carrying companies and stock-yard owners, opposing any interference with the free and untrammeled movement of stock from west to east, or from east to west, had always influence enough to override the feeble efforts made by a few stockmen—as so far no united effort has been made by the cattlemen of the west, as they have not even yet been sufficiently aroused to exert their influence in the protection of their hundreds of millions of property. But they will soon find it necessary to do so, or see themselves beggared by the results of their own too long-suffering carelessness in allowing carrying companies to sacrifice their property. It is true also that complications present themselves in applying federal regulations which are not seconded by state legislation, but true it is that when the cattlemen of the west get awakened to a sense of their danger, they will bring such influence to bear that no government can stand in opposition to their wishes.

Foot-and-Mouth Disease.

With reference to the contagious diseases—Foot-and-Mouth Diseases and Pleuro-pneumonia—Foot-and-Mouth is unimportant so long as it is confined to domestic herds, and attacks them during the summer. It will run its course usually in about fifteen days, often so mildly as to escape the attention of the owner ; but is very contagious as well as infectious, the vesicles continuing not more than four days, and the feet only being affected in some cases. Hence cattle-owners who hear so much of the dreadful Foot-and-Mouth Disease are at a loss to believe that the mild fever, the faint vesicles in the mouth, the absence of foot eruptions, can be genuine Foot-and-Mouth at all. We had several instances of such even in professional men—one at a United States quarantine station, where the inspector, even after being told that it was Foot-and-Mouth, did not believe it till it had spread from the imported stock and infected 600 outside animals ; and even at our own quarantine the same owner did not quite believe the correctness of the diagnosis till two weeks had elapsed, and he saw it spreading, and the symptoms becoming more marked, in new cases. Even a professor, himself an inspector, who visited the quarantine, was so disappointed by the mildness of the symptoms, as compared with what he supposed they should be, that he concluded that it was not Foot-and-Mouth ; and went so far as to suggest to the School of Cavalry, camped a few miles off, that they should send for the milk and use it. Then our good sense, however, prevented them, they being refused not only milk but admission to the quarantine.

The unimportant character of the disease, however, changes when we consider it as occurring on a range, where, in many cases, they have considerable travelling to do in gathering their food as well as in going to water. Affected by this disease, we can understand that they would suffer severely for want of water, and their sufferings would be aggravated should it occur in winter. Its great contagiousness, both by diet and intermediary objects, is a marked

feature of the disease. Railway cars, steamboats, cattle-yards, wharves, men's clothing, hay, halters, bags, etc., etc., are all media of communication of the disease to other herds.

The Nature of Pleuro-pneumonia.

Pleuro-pneumonia is slower in its progress and more defined in symptoms. An experienced veterinarian who wants to give a correct opinion need make no mistake in this disease, if he sees the animal living and makes an autopsy at the time of death. There is no other disease of bovine lungs exactly similar to it either in the clinical manifestations or in the *post-mortem* lesions. Its contagiousness, its progressive stages, pathognomonic symptoms, and the characteristic pathological lesions are all so well marked as to leave no excuse but ignorance for an erroneous opinion of the disease. Yet, strange to say, men occupying high positions in the profession have urged that the Lung Disease of the United States was "of a milder form than the European disease." Many even deny its existence, and one leading British veterinarian went so for as to insist that the disease as seen by him was Sporadic Pneumonia; and he had immediately several echoes on this side of the Atlantic, who sought to bring themselves into notice by ranging themselves in line with him in the sporadic theory, but, echo-like, they soon died away.

The great danger to be apprehended from these diseases arises from the subtle nature of their contagiousness. Pleuro-pneumonia, Foot-and-Mouth Disease, Hog Cholera, and Scab in sheep, are all spread through the channels of commercial communication—notably steamboats and railroad cars and yards. Unless by a prolonged quarantine or actual prohibition, it would seem to be almost impossible to prevent their spread once they gain a foothold in a country, when we consider the numerous intermediary agents of communicating the virus, through the clothing of attendants, ropes, halters, blankets, hay, bags, buckets, feeding-troughs, etc., which retain the virus for months in so active a form that, if brought in contact with healthy animals, the disease is sure to be communicated.

The Contagious Character of Disease.

Take, for instance, the outbreak of Foot-and-Mouth Disease, in February last, at Portland, Me. The imported cattle were being landed at the wharf; a farmer driving a pair of black oxen, ignorant of any danger, followed them admiringly for a couple of miles on his homeward road. Next morning he took his oxen to the forge to be shod, another pair of oxen were shod shortly after his. The result was that the black oxen sickened, and infected his other cattle; the other oxen became infected at the forge. They carried the disease home with them, and from these centres the disease spread till probably six hundred animals were affected.

Take the history of Pleuro-pneumonia in any country in which it exists, and you will find similar history of its extension. In Australia, as related by Mr. Fleming, it was introduced by means of an English cow imported into Victoria, and landed in Melbourne in 1858. When the disease was discovered among the imported cattle, steps were at once taken to eradicate it. All the cattle on the farm was paid for by public subscription and destroyed, and the farm placed in quarantine. Unfortunately, however, the quarantine was not strictly maintained, and a greedy, ignorant neighbour, who owned several teams of working bullocks, which he usually employed in carrying on the roads, seeing the good grass in the infected paddocks, put his cattle into them during the night and removed them at daybreak. His cattle soon became infected, and as he shortly afterwards sent his teams on the roads on a journey to the border of the colony, they spread the disease in all directions as they went. His other cattle mixed with his neighbours', and in this way the malady was diffused around his own farm.

The Death-rate from Disease.

The great danger from this disease is its insidiousness. Were it a rapidly-spreading, death-dealing plague like Rinderpest, it would not be so dangerous, as it would then be more liable to rouse the people and Government to united action for its effectual suppression. According to Fleming, the death-rate from Pleuro-pneumonia may be estimated at from 15 to 20, and in many instances as high as 70 per cent. In mild invasions they may only be 20 to 25 per cent., but on those of a severe character they may amount to 70, 80, or 90 per cent. In general, however, the loss from death and from animals slaughtered or disposed of on account of the disease may be estimated at about 60 per cent. This, nevertheless, does not represent all the harm wrought by the Lung Plague. What with the long duration of the malady, the slow and protracted convalescence, the consecutive disorders, perhaps permanent loss of condition, the expense of medical treatment, the non-productiveness of the animals for months, etc., all this makes Pleuro-pneumonia one of the most disastrous plagues that can affect a cattle-producing country.

The truth of this may be easily verified in the history and literature of the malady, particularly in England and Holland—two countries in which it was allowed to extend and prevail for many years before concerted action was resorted to for its suppression. In England the loss in six years amounted to a million head ; while in Holland, in 230 parishes, the yearly loss has been reckoned at 42,661. In France the disease has caused great losses in the northern departments, where there is more importation and movement of cattle, owing to the facility with which they can be fed on the residues of distilleries and sugar-refineries. According to statistics of the losses caused during seven consecutive years in 217 communes of the Department of the North, it would appear that the annual mortality in a bovine population of 280,000 was 11,200, or a total in nineteen years of 218,000 head, whose value Reynal estimated as amounting to no less than fifty-two million francs. In Australia the losses in thirteen years are estimated at about 1,404,097 head, which, if valued at 30 dols. each, would amount to 42,122,910 dols. from that disease alone.

In England, during six years ending 1860, the losses are estimated at considerably more than 1,000,000 head, or at least 60,000,000 dols., or 10,000,000 dols. per year.

Gentlemen, these are the facts and figures which elicited from Sir Richard Temple, when speaking of this great and promising country of ours, the emphatic expression—so full of meaning, so timely a warning—"For Heaven's sake try to keep out Cattle Disease." Knowing well that free from disease in our herds the agricultural progress of Canada cannot be hindered, but knowing well, too, the difficulty which will be encountered in fighting against so many insidious sources of infection, nothing but the most stringent measures and careful watching will avert the great calamity ; but that the disease can be kept out, I have not the least hesitation in affirming.

Quarantine in Canada.

Canada to-day is free from all contagious disease, thanks to the wisdom of our Government in listening to and acting on the advice of those who made a special study of the question. The establishment of the quarantine at Quebec in 1876 was the initial step in the formation of the quarantine system which has kept Canada in the proud position of being the only large cattle-producing country in the world free from disease, whose cattle can enter alive any market in the world, placing them at a premium of 20 dols. a head over any other cattle, or a million and a half dollars on the exported cattle per annum. Not this alone, but the development in stock-breeding, both in numbers and quality ; the establishment of large ranches where cattle are bred in thousands ; a general and very marked improvement in agriculture to meet

the feeding requirements; the stimulus which all this has given to immigration of the proper class of farmers to our great North-west—all confer advantages on the country which cannot be estimated: and in all this we feel justified in claiming that the veterinary profession as such has played no unimportant part in seconding the efforts of the Government in conducting and carrying out the quarantine system.

Our Live-stock Interests.

Of the importance of the live-stock interests in the commercial relations of the country, I have only to mention the fact that no less than 208,633,500 dols. are invested in live stock in Canada, that the European export trade alone amounts to over 8,000,000 dols., and that were it not for this export cattle-trade many of our principal Transatlantic freight-lines would have had to lay up half of their boats for the last few years, the effect of which on general commerce can well be imagined.

Canada is essentially a cattle country. Our grass, our water, our climate, all favour it. Let our live-stock interests suffer by any embargo which may be placed on our cattle, by relaxation of regulations or the introduction of disease, and the results would be deplorable.

Thanks to the forethought and good judgment of the Hon. John Henry Pope, Minister of Agriculture, thanks to the vigilance of our Hon. High Commissioner and the wise counsels of the veteran Premier, Sir John A. Macdonald and his Cabinet, there need be no apprehensions as to the continuance of such regulations, from one end of the Dominion to the other, as will insure our present proud position.

Can disease be kept out of Canada? Of course it can; not one of the diseases referred to arises *de novo;* they are all due to a specific virus, and if all sources of contamination by that virus are avoided, the disease is prevented. It has been argued that an extended frontier renders it impossible for us to prevent the smuggling in of animals at certain points. This argument simply implies ignorance both of the diseases and the means of preventing them. How far will cattle suffering from any of these diseases travel on a trail without showing them? Not many hundred miles. With the carriage of animals on railways prevented, with the police and customs services co-operating with the quarantine service, it would be very difficult to introduce any animals suffering from disease, unless, indeed, it were done maliciously and purposely. No sane man would risk smuggling one or more animals which were liable to seizure, and himself to a heavy fine.

A comparison of the statistics of the value of the live stock in Canada, including horses, cattle, sheep, and swine, as shown by the census of 1871, amounting to 156,607,500 dols., with that of 1881, amounting to 208,633,500 dols., shows an increase of over five millions of dollars a year. It will thus be seen that an immense sum is invested in live stock, and I am proud to be in a position to say that our Canadian stock will compare favourably with that of Great Britain or any other country.

The Ranches in the North-west.

It may be interesting for you to know that the foot hills by the Rocky Mountains is being stocked with animals of excellent quality. Senator Cochrane remarked to me only a few days ago that he saw hundreds of cattle on the Cochrane ranche which would, in point of merit individually apart from pedigree, compare favourably with the thoroughbreds on his Hillhurst farm, which is saying a good deal; and when I tell you that there are already large numbers of pure-bred Hereford and Polled Angus bulls on the ranges, and a strong desire to increase their number, you can see how in a few years Canada will take no back seat as a cattle country. By the papers

last night we learn that the President of the Canadian Pacific Railway Company has gone to England, to arrange for the establishment of a line of steamers between Port Moody, Japan, and China. Who can tell but at no far distant date Canadian cattle will find a market in these countries, for breeding purposes at least? It is far from improbable. I am told by Mr. Arakowa, that the northern part of Japan is admirably adapted for raising cattle, and that the market would be an excellent one. In fact, it is more than probable that the enterprising people who send their most promising young men to all nations where progressive ideas are to be gleaned, have some such object in view in sending him to Canada. At all events, he will, no doubt, form a link in the chain which is being forged to connect the commercial enterprise of the East with this continent. It will thus be seen, gentlemen, that in entering on the study of this profession to-day you adopt a profession which in the future will occupy no mean position, but one of great responsibility. Current events all go to show that it is necessary for you "to be well trained (as Mark Twain said of the babies), for we are going to leave a big contract on your hands."

At the close of the lecture, Dr. Leclerc, Secretary of the Council of Agriculture, translated portions of it in French, for the benefit of the French-Canadians present, and after some remarks by Dr. Osler, the proceedings were brought to a close.

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

THE usual quarterly meeting of this association was held at the Blackfriars Hotel, Manchester, September 10th, 1884. Tea at 5 p.m. and business at 6 p.m.

There were present—Mr. Peter Taylor, President, in the Chair; Messrs. Thos. Greaves, William Whittle, A. New, J. S. Hurndall, A. Brookes, S. Locke, W. A. Taylor, Jas. Howell, Jno. Lawson, T. Hopkin, Wm. Dacre, and J. B. Wolstenholme, members. Also visitors: Messrs. Banham, Porteus, Carter, Race, Lawson, Herbert, and Laithwood.

The minutes of last meeting were read and confirmed.

Letters of excuse for non-attendance were received from the following gentlemen, viz.—Professors Williams and Walley; Messrs. Wm. Woods, Wm. Leather, E. Faulkner, E. W. H. Darwell, Thos. Briggs, Jas. Marshall, and E. Thompson.

A letter was also received from Mr. E. H. Leach, desiring that his name should be removed from the list of members, owing to his removal to Newmarket. This was agreed to, the members regretting that distance made it impossible for Mr. Leach to attend.

Mr. Greaves nominated for membership Mr. J. H. Cox, M.R.C.V.S., 5th Dragoon Guards; and the Secretary nominated Messrs. Frederick Proctor, M.R.C.V.S., and James Haslam, M.R.C.V.S., both of Manchester.

Mr. Tedbar Hopkin then read a short and practical paper on Quittor, its treatment, as follows:—

Cases of Quittor prove at times intractable and obstinate enough to make us wish for more certain modes of treatment. Some four or five recent cases of sinus with external opening at the coronet have been treated by us with the minimum of annoyance.

Successful surgeons will, I think, bear me out in the statement that a similar line of treatment may be followed by different individuals with very dissimilar results, depending on the neglect or careful observation of minute details. This has been the case with us. I believe, in the treatment of Quittor, we have not adopted any new method, but by the continuation of two well-known modes and careful observation of detail have attained much more satisfactory results.

Our mode of procedure has been as follows:—First we accurately ascertain by means of probes the exact depth and direction of the sinus. We next introduce a hot iron, carefully following the direction of sinus, thus avoiding wounding sound tissue. When by this means the sinus is thoroughly patent, dry tow rubbed in pulv. Hydrarg. perchlor. is introduced. If the sinus is at all tortuous, a fine twig from a hawthorn hedge, with the tow wrapped round, should be passed to the bottom of the sinus and retained there by means of a bandage passed round the coronet. After twenty-four hours remove the bandage and apply warm poultices for ten days to a fortnight, at the end of this time, if successfully done, a slough or core, about the size of your finger and exactly corresponding to the shape of the sinus, will require removing. The patient should be kept quiet, as movement tends to work out the plug too soon.

Caustics which do not convert the sinus into an open wound sufficiently large to admit of the index finger being introduced are useless.

For years I have been in the habit of introducing pulv. Hydrag. perchlor. in a piece of paper folded into the old-fashioned spill shape, but without getting out a slough of any moment, and it has been most unsatisfactory.

The after-treatment we have adopted has either been ointment of vaseline and iodoform, or Lotio plumbi acetat. et tinct. sulph.; often the ointment first and the lotion to finish with. If indolent or tardy in healing, a cantharidine blister will prove beneficial. When more than one sinus, each should be plugged separately. The worst complication is when you get a sinus running under the lateral cartilage; in these cases it may be necessary to cut down and remove with the knife a portion of the cartilage. I have, in some of these cases, sloughed away the tissues by applying a paste made with sulphur and sulphuric acid, followed by poultices until the cartilage has been exposed, and after cutting the obstructing portion of the cartilage away, got to the bottom of the sinus; it is needless to say this requires very carefully doing, or we may open the synovial cavity with so powerful a caustic.

The first case in which we employed the dry tow well covered with the powder was one that had been some months under treatment by a neighbouring practitioner, and when brought to us there were three distinct sinuses. It was a hind foot of a kicking roan mare; but with strictly following up the line of treatment described, we had the satisfaction of seeing her at work in about six weeks.

No. 2 was a grey cab mare, also in the hind foot. The sinuses ran from above downwards, and in this case we thought it advisable to remove a portion of the wall corresponding to the direction of the sinus before plugging; after which, blister was applied twice, and the animal turned out to grass; this made a good recovery, and was at work within eight weeks.

No. 3, also a grey cab mare, with one sinus in the hind foot—was plugged as described, and only visited some three or four times, and discharged fit for work in three weeks.

No. 4, a roan cart-horse, also in the hind foot, a case of some standing, with a patch of grease surrounding the external opening of the sinus, with the usual characteristic offensive weeping; plugging, poulticing, and a cantharidine blister effectively cured both the Quittor and grease in less than four weeks.

You may possibly say that four cases are not sufficient to base an opinion upon, but three of them were certainly bad ones, two because of their old standing, and the other from the direction of the sinus. I should also like to direct your attention to a coincidence, if it is nothing more: two were roans and two were greys: black horses are certainly more subject to grease. Are roans and greys more often affected with Quittor? and if so, why?

In concluding the subject, I should like to emphasize the necessity of

following the principle laid down of converting the sinus by means of sloughing into an open wound, and believe this can be most effectually done, first, by means of the hot iron passed into the sinus, which will (if you know accurately the depth and direction) enable you to insert your caustic to the bottom, the iron making it more defined and large enough to receive sufficient caustic to produce the necessary sloughing.

A very interesting discussion followed, in which the speakers indicated the treatment they had found to be most successful.

Mr. GREAVES preferred using a saturated solution of zinc sulphate, and applying blisters to the coronets for three or four successive days.

Mr. PETER TAYLOR thought that each case should be treated as its condition demanded, and that it was advisable to use mild remedies at the onset.

Mr. HOWELL adopted a solution of Hydrarg. perchlor. in spirits, lini 1 ad 8; then using pulv. Hydrarg. perchlor. Be careful and never use arsenic in foot cases; as a mild dressing he preferred zinc sulpho-carbolate in glycerine.

Mr. DACRE referred to the frequency of Quittor, through use of the Charlier shoe.

Messrs. HURNDALL, W. A. TAYLOR, BANHAM, and LOCKE also spoke, after which Mr. HOPKIN replied.

Mr. WOLSTENHOLME exhibited the inferior maxilla of a young female goat, in which both branches were affected with Osteo-sarcoma.

Mr. LAITHWOOD exhibited a small bitch, in which he had successfully performed Cæsarian section.

Mr. JOHN LAWSON related two interesting cases in horses, one in which marked abdominal pain was accompanied by syncope; it recovered; and the other was one of extensive destruction of the skin of haunch by sulphuric acid, in which the centre of the cicatrising area had resisted for months all treatment to produce completion of the process.

Mr. HOPKIN related an unusual case of blood-poisoning which had occurred in the practice of a friend at Congleton, in which the tongue and face of a grey horse were very seriously involved.

Mr. W. A. TAYLOR exhibited the elbow articulation of a young cart-horse in which open-joint had supervened on injury by a kick from another horse.

Mr. GREAVES proposed that a vote of thanks be given to Mr. Hopkin for his valuable and practical paper. This was seconded by Mr. JOHN LAWSON, and carried unanimously.

Date of next meeting to be Monday, December 29th.

JOHN B. WOLSTENHOLME, *Hon. Secretary.*

MIDLAND COUNTIES VETERINARY MEDICAL ASSOCIATION.

(*Continued from page* 371.)

Mr. GREAVES said it had always been his custom to follow every horse that died of Glanders to the knacker's yard, and there make a close examination of it. He had examined two malignant cases during the past two years, which showed not the slightest vestige of tubercles in the lungs. The lungs did not always form the seat of disease. Several times he had inoculated donkeys by scratching the skin and inserting some glanderous matter; the disease always ensued. Hearing that a cow had died of Glanders in one of the Midland counties, he inserted a good supply of glanderous matter into the body of a cow, repeating the operation five or six times. But he was unable to produce the disease, and was therefore convinced that cows were not liable to it.

Mr. PRITCHARD inquired whether Mr. Greaves understood that the grease from a horse, if inserted into the body of a donkey, would produce Glanders?

Mr. GREAVES said he had heard so, but he had never tried any experiment.

Mr. OLVER asked Mr. Greaves why it was impossible for Glanders to arise spontaneously. All diseases arose spontaneously at some time or other. Some time ago he had a case similar to that mentioned by Mr. Barling, and for some time he was unable to account for it. Ultimately he discovered that the horse had stood in a shoeing forge for a quarter of an hour with another horse, which had been trephined, and had given exit to a large quantity of matter from the frontal sides; this, to his astonishment, turned out to be a case of Glanders.

In reply to the remark that glandered horses do not work, he mentioned that in the old coaching days there were separate studs of glandered horses, which did their work the same as the others, being kept separate from them.

The CHAIRMAN said that although he had only been in Birmingham a few years, he had seen hundreds of cases of Glanders, and he was firmly of opinion that the disease was capable of being generated in the system. If not, why should ninety-nine cases in a hundred occur in old horses? Young horses frequently died from Glanders, the result of bad stables, bad drainage, and bad "doing" had a great deal to do with it. It was impossible to get rid of Glanders when it broke out in a stud, unless they pulled down the stables and built fresh ones. No cleansing or wall-chipping would be of permanent avail. He was certain large numbers of glandered horses were worked constantly on sixty miles of the Junction Canal between London and Birmingham, until the law stopped them. They could not be too firm in telling all their clients how virulent the disease was. Referring to what was called proper inspection of horses, he said that Glanders was not inspected by fit inspectors. People were often allowed to keep a horse suffering from Glanders, when it was, or should be, well known that if it had once been contracted it was certain to break out again. He would rather kill twenty animals on suspicion than pass over a genuine case.

Mr. W. C. BARLING related a curious case of Glanders in a horse attached to a coach running from Newnham to Cheltenham. The disease having broken out, the animal was isolated, and, under good treatment, it appeared to entirely recover. For six years it gave no trouble, and it died as sound and as free from Glanders as it was on the day it was born.

Mr. F. W. BARLING did not think disinfection was efficacious as a remedy against disease. The only way to rid a building of disease was to pull it down. Pulling down the mangers was insufficient. He knew a farmer who had Glanders amongst his horses, two of which he consented to have shot; after they had been removed, the stable was disinfected and no animals were put in it for three or four months, at the end of which period the horses were again placed there; they had only been back a very short time before two or three of them were attacked with Glanders. The farmer then had the stables pulled down, and since then, now two years ago, there had been no trace of the disease upon the premises. This experience confirmed him in the belief that no disinfectants were a perfect cure.

The CHAIRMAN remarked that when veterinary surgeons had a large stud of horses to see to, such, for instance, as those belonging to a railway company, there was no better time for inspecting them than on a Sunday, because this was the day the animals were all at home. Unless constant inspection was made when an outbreak was discovered, it was impossible to get rid of the disease. Horses which apparently were thoroughly well on one Sunday might be attacked with Glanders before the next, and if they did not

show it so early, they most likely would do so before the end of twelve months. Now, as affected horses ought to be removed as quickly as possible, a casual inspection was insufficient. As soon as the affection made its appearance, the horse ought to be killed. He never recommended a man to keep a horse suffering from it.

Mr. F. W. BARLING: As to the inoculation of the ass: have you known a case in which the animal died on the seventh day?

Mr. GREAVES: Yes.

Mr. BARLING replied that he had never known death ensue until the tenth or twelfth day, and he remembered one donkey which took three weeks to die. Constitutional disturbances commenced on about the fifth day. He generally inoculated in three places.

Mr. GREAVES explained that different degrees of susceptibility accounted for different results. Death generally took place on the seventh day, although his experience in some cases had been similar to that of Mr. Barling. Shortly after he left college (in 1846), he was called to examine a number of horses worked on the canal between Manchester and Runcorn. Three hundred horses were employed, and the proprietors had had Glanders in their stables for fifty years or more. Professor Coleman had previously been there, and had condemned fifteen horses at a time. He (Mr. Greaves) had orders to destroy every horse on the banks which he found affected. Thirty he examined and found suspicious, but none were so far advanced in disease as to justify his certifying that they were suffering from Farcy or Glanders. The suspicious cases, however, he caused to be isolated and treated with large quantities of sulphate of iron or copper, and he also trephined twenty of them. This inspection continued every day for three months, and by the end of twelve months there was apparently no case of Glanders remaining, neither did any appear for seven or eight years. At the end of that time, however, it broke out again as virulently as ever. No matter how small the particles of disease-matter might be which were left in any part of a stable, it would be brought out even by a slight change in temperature, and might inoculate a good horse. It was, therefore, impossible to be too particular in attempting to get rid of it; in fact, as the President had said, the best way was to pull down the stable.

Mr. W. C. BARLING said, the chairman had expressed his belief that the disease was originated in horses which were not well cared for. Nothing was so conducive to degeneration as Glanders, and horses which were not well kept seemed to have some peculiar disposition in their system to take it. His practice was chiefly in the Forest of Dean, amongst coal and iron mines, and although cases of Glanders were very common in the pits years ago, twenty or thirty affected animals being brought to the top together, he had only seen one case himself and that not very bad. The stables particularly required ventilation; they were very much in the same condition as they were forty years ago, and yet a case of Glanders was never heard of now.

Mr. GREAVES: Why have you no Glanders if the stables are in that condition?

Mr. BARLING: The horses are better kept than they were many years ago, but they do the same work—day turns and night turns, and sometimes day and night turns.

Mr. GREAVES: And if Glanders could be produced without contagion, it would be found to exist in coalpits. He remembered a stable of cab-horses, the floor of which was made of wood. Beneath the floor, which had not been taken up for many years, there was a collection of débris, which was offensive in the last degree. Yet the horses had slept upon the boards breathing an atmosphere which one would think it was almost impossible to live in for years, and not a single case of Glanders was known. Plenty of

horses had Mange and other diseases, but no Glanders. If the latter had by any chance been introduced, the dirt and filth would have assisted in killing the animals like rotten sheep.

Mr. PRITCHARD asked Mr. Greaves whether he did not think the horses were considerably better cared for and "done" in the present day than they used to be. They did not find the same amount of debility amongst them now as they did years ago, or the other signs of weakness and disease which they understood as the antecedents to Glanders. He had heard his father frequently say that the coach-horses at Wolverhampton were never free from Glanders, and yet they did their work like the rest. If the disease was so extremely contagious, as had been represented, was it not surprising that all the horses in Wolverhampton were not reduced more or less to a glanderous condition? Where in the coaching days they saw 500 cases of Glanders, not one was known now, and why should the contagion be worse now than it was then? It used to be the practice, and it was a very good one, when there was any doubt as to a horse suffering from Glanders, to give him a dose of physic. This would soon develop the disease if any trace of it existed.

Mr. GREAVES referred to the better management of horses now-a-days, in explanation of the large reduction of cases of Glanders compared with the experience of coaching days.

Mr. MEEK was of opinion that it would be well if the law empowered them to slaughter all horses affected with Glanders as they did in the case of Pleuro-pneumonia. At the present time if they slaughtered a horse, which a *post-mortem* examination proved to be free from the disease, they were liable to be called upon to pay for it.

The CHAIRMAN agreed with Mr. Meek, and said he had for years been of opinion that the Association might be doing the profession and the country considerable benefit if they were to try and persuade the Government to give compensation for horses slaughtered when suffering from Glanders, just as they did for cattle killed under the Contagious Diseases (Animals) Act. But the first thing to procure was efficient inspection. Hundreds of glandered horses in the country were being worked, and their owners refused to take them to a veterinary surgeon, to say nothing of a professional doctor. This was the chief difficulty, because, as had already been stated, when there was any doubt as to a horse's condition, a dose of physic and a bran mash would soon cause Glanders to pop out if it existed anywhere in the system.

Mr. GREAVES completely endorsed what had been said with regard to compensation. It was quite proper that all suspicious horses should be destroyed. There were large numbers worked in the country, which, though showing no prominent signs of disease, were quite capable of conveying the infection. Such as these were extremely dangerous, in not being considered bad enough to be removed from other horses, because they might poison all horses that went near them.

Specimens.

After the close of the discussion, Mr. BARLING showed an interesting specimen of osseous decomposition, the result of Poll Evil. Mr. DREWITT exhibited the heart of a pig, which was believed had died from Swine Fever. On a *post-mortem* examination being made, however, a tumour was discovered in the heart, and this, instead of Swine Fever, was the cause of death.

Votes of Thanks.

Mr. WRAGG proposed a vote of thanks to Mr. Greaves for his interesting paper.

In seconding the proposition, Mr. MEEK remarked upon Mr. Greaves' kindness in travelling such a long distance to read his paper, and also spoke of the courtesy with which he had listened to his numerous critics.

The vote was expressed by acclamation.

Mr. GREAVES thanked the meeting for their kindness in passing a vote of thanks, and assured them that he regarded it not only as his duty, but as a great pleasure to meet the members of the M.C.V.M.A. They always received him with very great kindness, and gave him every opportunity of advancing his opinions. He had been placed in circumstances of special advantage during the past fifty years, and he had had a very large experience among horses—perhaps the largest in Manchester amongst cart-horses. He was always pleased to give other members of the profession any information he could, and he should be glad to have an opportunity of rendering them a little help at some future time. (Applause.)

On the motion of Mr. PRITCHARD a vote of thanks was accorded to the Chairman for presiding.

Mr. STANLEY briefly acknowledged the compliment, and the proceedings terminated.

Subsequently the majority of members in attendance dined at the hotel, when a very pleasant evening was spent.

WESTERN COUNTIES VETERINARY MEDICAL ASSOCIATION.

THE first half-yearly meeting of this Association was held at the Globe Hotel, Plymouth, on October 16th, J. A. Collings, Esq., in the chair.

Present: Messrs. T. Olver, H. W. Thomas, F. R. Stevens, J. Squires, H. W. Bloye, and the Secretary. The minutes of the last meeting were read and confirmed. Letters and telegrams apologising for non-attendance were received from Messrs. J. P. Short, Warne, Raddall, A. J. Down, W. Penhale, Junr., C. C. Hoadley, C. Parsons, C. H. Golledge, R. L. Penhale, and J. H. Penhale. Messrs. Elder and Hoadley were proposed as new members.

The CHAIRMAN then said that, owing to the lamented death of Mr. Gregory, the first duty of this meeting would be to elect a new President. On the ballot being taken it was found that J. A. Collings, Esq., was unanimously elected to the vacant chair. He said he deeply regretted the circumstances which had arisen to render the election of a President necessary; we had lost one who had been a standing ornament to the profession in the West of England for many years, and he was the last of a generation now passed away.

He truly felt the honour they had done him in electing him President, and would assure them all that nothing should be wanting on his part to keep the Association up to its present standard, and to make it a lasting success.

A letter was next read from Mr. F. Gibbings, resigning his office of Treasurer to the Association, as he was about to move from Bideford to Nottingham. Mr. F. R. Stevens was unanimously elected in his stead.

On the motion of Mr. COLLINGS, and seconded by Mr. STEVENS, the following vote of condolence was forwarded to Mrs. Gregory:—

"The Western Counties Veterinary Medical Association, now assembled in Plymouth, begs to express to Mrs. Gregory its deepest sympathy and regard for her in her recent bereavement. The members of the Association feel that no words of theirs can lessen the sorrow of those nearly related to their late friend and President, but they take it to be a duty to record the great loss they have sustained in the death of one so distinguished and so highly respected as the late Mr. Gregory."

A letter of sympathy from the Association, on the loss of his wife, was also forwarded to Mr. C. Parsons, of Launceston.

The PRESIDENT then read an able and highly instructive paper on some lung diseases of the horse and their sequels.

After a brief introduction, Mr. COLLINGS said he purposed touching on the two important maladies of Pleurisy and Pneumonia and their sequels; and, lastly, to state his views on that more general and specific form of pleuritic Pneumonia which he designated "Lung Fever." After having dealt with the former, he proceeded to draw attention to that form of lung disease which has been predominant for several years past, and which, for brevity's sake, he called Lung Fever. He regarded it as a fermentative action in the circulating fluid, concentrating itself in the lung structure, which, if it terminates favourably, produces the same cleansing and healthful effect on the system generally, as the eruptive fevers in the youth of mankind—in fact, almost taking the place of "Strangles," which may be termed an eruptive fever of the horse. This Lung Fever has many degrees of intensity, many associations, both at its commencement and during its course, and many sequels. In the mildest form it assumes simple Low Fever type, with but trifling increase of pulsation or respiration, which, with six or seven days of good care and ordinary treatment, passes away and leaves the patient convalescent.

In more decided cases, it follows, after three or four days, in the wake of a Low Bilious Fever attack; and again at times it shows itself boldly as a primary disease. The special feature he considered to be the extreme prostration accompanying it.

He sketched the following case:—

Patient standing dull and dispirited, and very prostrate; head down; fore legs generally wide apart; pulse 60 to 75; respirations 24 to 30 to the minute; membranes injected and of a dirty, cloudy hue; prolonged grunt, indicative of considerable pain, when turned, or rather, pulled round either way; extremities variable. The most advisable treatment to follow he found to be the exhibition of a saline with a stimulant. He preferred Sodæ sulph. ʒiv., Spts. eth. nit. *cum* Liq. am. acet. ʒii. *aa*, followed eight or ten hours afterwards by a ball—Ammon. carb., Potass. chlor. ʒii. *aa*, Camphor ʒi. daily. Actively stimulate both sides and chest with mustard, carrying it half way up the trachea; keep the extremities warm. To be followed in due course by vegetable tonics. He especially invited discussion as to the repetition of counter-irritation, and the frequency of stimulants. He never used mustard more than twice, as the action of it will be found quite sufficient once only repeated. Speaking of effusion, he said in our patients it is from auscultation that we must derive our most positive indication of effusion. He believed, with regard to its treatment, that it has been generally accepted as an established fact in horse-practice that when pleuritic effusion has once commenced, it gradually, although at intervals, increases until a fatal termination ensues; but he did not concur in this opinion, feeling confident that many cases, where considerable effusion has existed, have yielded to the action of the iodides, combined with general repletive treatment. This last is of great importance. As to the duration of pleuritic effusion, he had known it extend over a period of four or five weeks, the patient feeding well and heartily the whole time, and then walk over a mile to a knacker's yard. In this case both pleural sacs were nearly full, the lungs compressed and flattened so much that not one-twentieth part of their normal volume could have latterly assisted this animal in respiration.

After having described the operation of paracentesis thoracis, he said, on the subject of congestion, that when severe, it not unfrequently brings about a fatal termination in a few hours, and in such cases is usually designated

"Apoplexy of the Lungs." He had known a blood harness horse, in fairly good condition, die in three hours after a journey of ten miles. In the *post-mortem* of this particular case it was found that rupture of the lung tissue had taken place, and the deeply-carbonised venous blood, mixed with an effusion of frothy mucus, had filled the tubes and caused Asphyxia. He added that there is another most potent factor in bringing about a fatal termination, and that is embolism. By it we understand that a vessel has been obstructed by a fibrinous clot, which might have formed in the heart, or in the circulatory system, either arterial or venous, and by impulsion the clot has been forced into a vessel so as to plug it and obliterate its cavity completely. The consequence of such accident depends, of course, upon the importance of the particular vessel to the function of life. When it occurs in the pulmonary artery, death is almost instantaneous; if an artery in a muscular part, decomposition, gangrene, and sloughing must result.

There exists considerable difference of opinion as to the mechanism of the formation of these clots. He was inclined to believe that the cause of embolism must be in some special condition of the blood itself, probably an undue fibrinous condition of it; or, on the other hand, as Dr. Richardson attributes the fluidity of the blood to the ammonia it contains, embolism may result from a lack of that substance. Whatever the cause of it may be, he thought this clotting played a very important part in many of the diseases of our domestic animals, and the thinking pathologist may do well to bear this subject in mind when investigating such diseases as Splenic Apoplexy and Quarter-evil in cattle.

The conclusion of the paper was received with applause. An interesting discussion followed.

Mr. SQUIRES thought there could be no doubt but there were two forms of both Pneumonia and Pleurisy, one mainly arising from exposure to cold and inclement weather, the other to a specific virus in the atmosphere, which acted specially on young horses brought from the country into large towns, first producing the disease commonly called Influenza, which, under certain circumstances, notably that of undue exertion, ran on to Pneumonia and even Pleuro-pneumonia. He quite agreed with the essayist in his treatment of these cases.

Mr. THOMAS was of opinion that by far the large majority of cases of Pneumonia now occurring in large towns were due to a vitiated atmosphere, and were not at all like the old-fashioned attacks, which it was customary to treat by bleeding, blistering, aloes, and tartar emetic. He had now quite given up that line of treatment, and relied almost entirely on stimulants, preferring Spts. eth. nit. and Liq. am. acet., to be followed in due course by tonics and good food, and always with as liberal allowance of fresh air as circumstances permitted. He should like to hear Mr. Collings' opinion on counter-irritation. For his own part he had quite given up the use of cantharides as a counter-irritant, he found that it so frequently became absorbed into the system, and acted on the kidneys in such a manner as to produce grave symptoms; he now used mustard or a weak preparation of biniodide of mercury. In Hydrothorax he preferred digitalis to any other medicine. He had performed the operation of paracentesis thoracis on several cases, but on only one with success. In Purpura Hæmorrhagica he considered Ol. tereb. a most valuable remedy given in large doses, ʒiv. twice a day, to be followed by Ferri sesquichlor. in frequent doses, and chlorate of potash.

Mr. BLOYE was much in favour of Prof. Robertson's method of administering medicine in the form of an electuary placed on the animal's tongue, especially when suffering from cold and sore throat. He drew attention to the aspirator as being a most convenient and safe instrument for the removal of fluid from the cavity of the chest; the evils and dangers of the trocar and

cannula being avoided by its use. The instrument was a very simple one, and might be used with perfect safety by any surgeon.

Mr. OLVER strongly advocated frequent hot-water fomentations; he believed his patients found more relief from this than from violent counter-irritation to the sides; the only drawback to this plan was that as soon as the adviser's back was turned this remedy was often neglected; in rural districts he was quite certain this was sometimes the case. As for medicine, he was greatly in favour of Tr. aconite; in cases of oppressed and quickened breathing, with a heightened pulse, it appeared to afford relief sooner than anything he had tried. This, combined with the advantages of pure country air, is speedy in its action, and but rarely evanescent, as is often the case with stimulants.

Mr. STEVENS said that in dealing with these cases he attached great weight and importance to the internal temperature, for we are often able to judge the animal's condition better by the index of the thermometer than any other symptom; it was also a safe guide as to when one class of medicines may be substituted for another.

He deprecated the excessive use of counter-irritants, for not only did it frequently cause the sides of the patient to be blemished in an irreparable manner, but also on account of its irritating and exciting effects on the sick animal. He had seen more than one horse roll and throw itself about a box in a most violent and alarming manner from the smarting of an application of mustard to the chest. He could not help thinking that this method of cure, sometimes at least, led to worse results than would be the case if a milder and more soothing system were adopted.

Mr. COLLINGS, in replying, said he firmly advised at least one powerful application of mustard; the administration of internal stimulants he thought insufficient to rouse the vital action without counter-irritation. If his patient was not relieved twenty-four hours after the first application of mustard, he repeated, but he never went further than this; he was a strong advocate of counter-irritation. He then gave his experience of a very interesting but obstinate case of Purpura Hæmorrhagica, which only yielded to the treatment of carbolic acid and iron.

Mr. THOMAS proposed, and Mr. OLVER seconded a vote of thanks to Mr. Collings for his valuable paper, and only wished there had been more there to hear it.

The PRESIDENT announced that the next meeting would be held in Exeter, on the second Thursday in March, when Mr. Thomas would read a paper on the Diseases of Young Stock.

After the meeting the Association was invited to an excellent dinner provided by the members residing in Plymouth.

W. PENHALE, *Hon. Sec.*

THE WEST OF SCOTLAND VETERINARY MEDICAL ASSOCIATION.

THE ordinary quarterly meeting was held in the Veterinary College, Glasgow, on Wednesday, October 29th, 1884. The President, Mr. Campbell, occupied the chair. Present—Prof. McCall; Prof. Lewis, Edinburgh; Messrs. G. Fenton, A.V.D., McGill, London; Robinson, Jr., Greenock; Jarvie, Carluke; Hunter, Dundee; Constable, Inchture; Gardner, Helensburgh; Peddie, Cathcart; Houston and McGeoch, Paisley; Nesbit, Galston; Kerr, Dalry; Taylor, Cathkin; Allan, Clarkston; Bowie, Stranraer; McIlwraith, Milngavie; McDonald, Campbelltown; McGregor, Ayr; W. Anderson, Jr., Mitchell, Weir, Wyper, Boyle, Tweedley, Frew, Muir, Stewart, and the Secretary, Glasgow.

The Minutes of last meeting having been read and approved, the office-

bearers for 1885 were nominated, as follows—President, Mr. Campbell, Kirkcudbright; Vice-Presidents, Prof. McCall, Messrs. W. Anderson, Jr., and A. Robinson, Jr.; Treas. and Secy., J. Macqueen.

The PRESIDENT called the attention of the members to a letter which he had received from Prof. Walley, asking him to bring before the meeting the subject of subscribing to the Building Fund for the new Home for the R.C.V.S. Several members having spoken in praise of the scheme, it was agreed to leave the matter to the discretion of the members individually.

Prof. LEWIS said that his chief object in attending the meeting was to ascertain when and where the annual conjoint dinner of the three Scottish societies will be held. He understood that the Scottish Central Society was in a state of suspension, and therefore unable to take any active part in the celebration.

Mr. CONSTABLE said that the Scottish Central Society felt it could not take the responsibility of superintending the dinner this year; but that its members would be very pleased to assist as far as possible in making the meeting a success, if held in Glasgow or in Edinburgh.

The PRESIDENT said the dinner must take place, and if the Scottish Central could not carry out its share, then the West of Scotland Society must make the necessary arrangements to hold the reunion in Glasgow.

Mr. ROBINSON spoke in support of the Chairman's remarks. It was agreed to entrust the whole arrangements to the Presidents and Secretaries of the three Scottish societies.

Mr. ANDERSON, Jr., in a spirited speech, directed the attention of the members to some recent prosecutions for cruelty by the Glasgow Society for the Prevention of Cruelty to Animals. He said the manner in which the prosecutions are carried on is shameful, and he thought some steps should be taken to ensure consideration and respect for veterinary evidence in the police-courts. In one case the treasurer of the "Cruelty Society" sat on the Bench as a magistrate, and he need hardly add that the case went against the defender.

Messrs. MITCHELL and PEDDIE also gave particulars of cases in which they considered they had been badly treated.

Mr. BOYLE said that veterinary surgeons were much to blame for the way in which their evidence was received. Some of them attended court and bolstered up cases that they knew were really well-founded cases of cruelty, simply because the defender happened to be a client.

Mr. ANDERSON in reply said that he would act for himself in the meantime, and that he would prepare a paper on "Cruelty to Animals in all its Phases," which he would read at next meeting.

The PRESIDENT then read an interesting and highly instructive paper on Rheumatic Arthritis in foals. In the short discussion which followed, Messrs. Mitchell and Weir were the chief speakers.

After the usual vote of thanks, the meeting terminated.

J. MACQUEEN, *Secretary.*

ROYAL AGRICULTURAL SOCIETY.

AT the monthly Council-meeting of this Society, held on November 5th,

Lord EGERTON (Chairman) reported that the Committee had received letters from the Newcastle Hide Inspection Society on the subject of a prize of £30, which they propose to offer for the best essay on "Warbles in Hides—their cause and prevention or cure," and that, in accordance with their request, the Committee had nominated adjudicators. A report had been received from Professor Axe on an outbreak of abortion and premature birth in the ewe-flocks of Lincolnshire, a copy of which he had furnished to

the Lincolnshire Agricultural Society. A deputation from the Royal College of Veterinary Surgeons had had an interview with the Committee in reference to the Society's recent veterinary appointments, and the delegating to certain veterinary surgeons the Society's authority to supply the medicines recommended by Professor Brown in his paper on the "Domestic Veterinary Treatment of Animals of the Farm;" but the Committee saw no reason to change their opinion on the subject.

This report having been received, the Chairman gave notice that at the next meeting of the Council he would move for the removal of the veterinary grant for the year 1885.

Mr. DENT moved "That in the opinion of this Council it is desirable that the Privy Council should issue such an order, binding upon all local authorities in counties and boroughs in Great Britain, as may provide for the satisfactory isolation of all animals in infected places, and the disinfection of all persons and things which may have been in contact with the same, and so do away with the necessity of licences for the removal of cattle from the district of one local authority to another." Mr. Dent stated that the local authorities of the northern counties had already had one conference on the matter, and proposed to hold another, and he believed that the authorities of the Privy Council only wanted some pressure put upon them. There was already an order by which, immediately on the outbreak of Foot-and-Mouth Disease, the place was declared an infected circle, out of which no infected animal could be moved; but we wanted to ensure that these animals should be carefully watched, and that all infected animals should be carefully isolated. As at the present moment there was no Foot-and-Mouth Disease, it appeared to him that this was the time to take action, with the view of stamping out any case that might unfortunately occur. Such an order as he contemplated would do away with one of the greatest nuisances and frauds, that is, the issue of licences for the removal of cattle; and it would also, he believed, enable all the markets to be kept open, and the trade of the country would be very little interfered with.

After a conversation, Mr. WAKEFIELD seconded Mr. Dent's motion, which was carried unanimously.

Professor BROWN reported that, since August 6th, fresh outbreaks of Foot-and-Mouth Disease had been reported as follows:—Week ended August 16th, two outbreaks; August 23rd, three; August 30th, three; September 6th, one; September 13th, three; September 20th, one; total, 13. These outbreaks occurred in Essex, Gloucester, Hants, Kent, Leicester, and Norfolk. The whole of the diseased animals had recovered by October 11th, and since that time no case had been reported to the Agricultural Department.

Army Veterinary Department.

VETERINARY Surgeons Dwyer, Day, Joslen, Fenton, and Kelly have embarked for India.

Accompanying the British Force on its long and fatiguing march for the relief of Khartoum, are Veterinary Surgeons Burt, Clayton, Smith (S.M.), Bennett, Griffiths, Mitchell, Beech. Veterinary Surgeons Queripel, Jones, and Spooner have also embarked for service in Egypt. The Army Force intended to operate in the Zhob Valley (Afghanistan), against certain disorderly tribes, is accompanied by Veterinary Surgeons Pringle and Raymond. Strange to say, the Afghan Russian Frontier Commission, which has started from India to define the limits between these two countries, and which consists of more

than 300 horses, and a transport of 600 mules and 1,400 camels, has no veterinary surgeon with it. This is all the more remarkable as the duties will be very arduous and extend over a long period of time.

An expedition to Bechuanaland, South Africa, having been determined upon, Veterinary Surgeons Woods, Crawford, Cox, Elphick, and Berne have embarked for service in that country. Veterinary Surgeon Woods was despatched from England to Cairo to take charge of the 19th Hussar horses (that regiment being mounted on native horses while in the Soudan), and to accompany them through the Red Sea to Natal, where they will be mounted by the 13th Hussars, which proceeds from India to that colony, there to remain until the disturbances have been quelled. Veterinary Surgeon Rutherford marches with the 6th Dragoons from Natal to the Cape Colony to take part in the expedition to Bechuanaland.

Notes and News.

INTERNATIONAL HEALTH EXHIBITION.—We understand that Spratts Patent have received a prize medal at the International Health Exhibition, 1884, being the highest and only award for their class of goods. It also gives us great pleasure to learn that the gold medal and certificate of honour have been awarded to M. Pasteur for his laboratory inventions and his investigations in pathology. It is likewise gratifying to find that a silver medal has been awarded to Professor Tuson, of the Royal Veterinary College, for his new disinfectant preparations.

MANITOBA.—We are pleased to learn that this most promising portion of our North American territory is making an excellent commencement in prosperity by instituting a Department of Agricultural Statistics and Health. The work of the Department embraces, among other things, the establishment of a veterinary school, the supervision of the practice of veterinary surgery and the licensing of practitioners, and the enforcement of the laws relating to diseases of animals, with the assistance of a veterinary sanitary service, embracing a consulting veterinarian to the Department, and a district veterinarian in each county.

EXPORT AND IMPORT OF HORSES.—During the month of September the number of horses exported from this country was 660, against 950 in the corresponding month last year. To British North America 178 were sent; Belgium, 112; France, 105; United States, 56; and other countries, 209. The exports for the nine months ended September 30th were 5,832, against 6,077 in the corresponding period last year. The value of the exports last month was £32,942, and for the nine months £342,281. The value for the same nine months last year was £340,373. We imported in September 1,291 horses, against 712 in the corresponding month of last year. The horse export for the nine months is 10,836, against 7,724 last year. The value of the import in September was £21,790, and for the nine months £209,568, against £155,966 last year.

CAMELS.—The British military authorities having decided to employ a Camel Corps in Egypt, have issued an order instructing the soldiers to treat the camels "with kindness and consideration," and strictly forbidding the use of "foul language" in the hearing of those interesting animals. The camel is said by those who are well acquainted with him to be about one-third more exasperating than the army mule. Like the latter beast, he kicks but, his legs being strengthened by natural angle irons, and being twice as

long as the mule's legs, he can do correspondingly greater execution with them. No intelligent Arab will approach within eighty feet of a camel's hind legs, and even with this precaution nearly one-half of an average Arab caravan is kept in the air by accidents from camels' legs. As for biting, the army mule is a mere beginner in comparison with the camel, who will bite entirely through a mountain howitzer without an effort. The mule has his intervals of good temper, but the camel is always misanthropic. Moreover, the camel is rendered so conceited by the possession of half a dozen spare stomachs, with watertight bulkheads, that he will never sacrifice his opinion to that of his driver. And this is the animal who is to be treated with "kindness and consideration," and who is never to be whipped or sworn at! If this order is obeyed the fate of the Camel Corps can be easily foreseen. Heedless of the coaxing of the driver, the camels will carry the British soldiers who are compelled to mount them straight into the heart of the Sahara, where the soldiers will either perish of thirst or of camels' heels. In vain will they be addressed as "good camels," and offered sugar and other delicacies. The beasts will be filled with contempt for the weakness of their riders, and will lose no time in demonstrating that a healthy camel is the master of the man who treats him with kindness and consideration. What Lord Wolseley ought to do is to send to America for a corps of veteran army teamsters, selecting only those who can pass a good examination in competitive swearing. These men might be able to manage the camels as well as the Canadian *voyageurs* are able to manage the rapids of the Nile. At any rate the order requiring camels to be treated with kindness and consideration should be promptly rescinded, for kindness is as completely thrown away upon the camel as reasoning is thrown away upon the Blaine man. —*New York Times.*

A POISONOUS LEGUMINOUS PLANT.—It is stated that in the valley of the Missouri grows a weed known as wild pea, or rattle-box. This the horses have learned to eat, and the effect is a slow wasting away, even on good pasture and with good food, and death follows. In a number of cases there was stupor, the animals often falling asleep while eating. In some instances the animals would remain standing for a whole week, sleeping much of the time with head resting against some object. Professor M. Stalker, of the Veterinary College, at Ames, Ia., has been making a careful study of the malady and its cause, and finds that the disease has been known in this region for three or four years, but had not until the present summer prevailed to such an extent as to attract general public attention. But now the loss in horse stock on some farms was not to be counted by hundreds, but by thousands of dollars. It would be interesting to know whether this poisonous "wild pea" is identical with, or related to, a poisonous leguminous plant belonging to the tribe Indigofera, which, after recent droughts, has occasioned great losses—amongst stock-sheep especially—in the Australian Colonies.

DOGS IN AUSTRALIA.—The Agent-General for New South Wales is informed that the prohibition against the importation of dogs into New South Wales has been removed, but dogs from places outside the Australasian Colonies will be subject to quarantine for six months after arrival.

THE LATE PROFESSOR ERCOLANI.—A short time ago we announced the death of the very distinguished anatomist, zoologist, and veterinarian, Professor Count Ercolani, of the Bologna University, and who was also an Honorary Associate of the Royal College of Veterinary Surgeons. We now learn that his widow has presented his veterinary library to the municipality of Bologna, his native city. For rare manuscripts and books in the special subject, the collection is said to be unrivalled in the world.

Correspondence.

THE PRACTICAL EDUCATION OF STUDENTS AND VETERINARY SURGEONS.

DEAR SIR,—The subject of your editorial in the current number of the VETERINARY JOURNAL is of such vast importance to our profession, that I am induced to ask you to kindly insert the following remarks in your pages.

Perhaps at no period within our recollection has the want of practical knowledge been so prevalent as it is at the present time, not only amongst candidates for the diploma of the Royal College of Veterinary Surgeons, but also amongst those who have actually passed their final examination, and who are, therefore, considered to be fit and proper persons to practise their profession. It is very humiliating to have to confess that such a state of things as this exists, but the fact is, nevertheless, perfectly true, and it is only by placing it forcibly before the members of our profession, and giving the subject thorough ventilation, that the cause can be arrived at and the remedy suggested.

As a proof of this deplorable deficiency of practical knowledge, I need only refer to the number of unsuccessful candidates who, during the past two years, have competed at the various examinations for commissions in the Army Veterinary Department. The majority failed to pass the practical test, and it will doubtless surprise many of your readers to learn that amongst them were found those who were actually incompetent to perform the most ordinary operations—to detect the lame leg, to "fix" the seat of the various exostoses, or to describe the "points" on the living animal so well known to almost every horseman. I could, if necessary, give many other instances of unpardonable professional incompetence which, from time to time, have been brought to my knowledge, but the above illustration is quite sufficient to point out the urgent necessity that exists for reform. Not only is this demanded for the sake of the profession generally, but also in the interests of the student: for does not his success in life depend, in a great measure, upon his knowledge of the various details of everyday practice? and, if he be found wanting in this respect, or deficient in manipulative dexterity at the commencement of his career, how is it possible that he can succeed?

I have heard it remarked that "with a sound groundwork of scientific teaching, practical knowledge will follow in due course;" but with this I do not agree. Both are necessary; but if the young practitioner be deficient in the latter, he will unquestionably fail. I do not contend that the majority of failures are to be attributed to this cause, for there are others too numerous to mention, that operate as bars to professional advancement; but I do maintain that in these days of professional competition a young veterinary surgeon has very little chance of earning his daily bread, unless he is possessed of something more than mere scientific and theoretical knowledge.

The picture drawn in your able editorial of the "weak-kneed" and undecided way of examining a horse "points a moral," and should act as a stimulant to all who aspire to make a name for themselves in our profession. Horsemen, as a rule, are very observant, and are by no means bad judges of the way this duty should be performed; and are certainly not the class of men to trust the examination of a valuable animal to an incompetent practitioner. Too much stress cannot be laid on the necessity of giving students every opportunity of becoming familiar with this important branch of their profession. Teach them to go about their work in a systematic manner—for examining horses without method is something like attempting

to steer a ship without a rudder—and then, if the necessary facilities for practising upon all classes of horses are afforded them, it will be their own faults if they fail.

As some men are born horsemen, so, doubtless, are others born veterinarians; and, although we can offer suggestions easily enough on the various points where reform is needed, we cannot ensure equal success in all cases.

The above remarks on the examination of horses for soundness, will apply also to the performance of operations, the different methods of securing the patient, and the various details of manipulation generally.

It is useless to expect expertness without practice. No amount of lectures on surgery, or demonstrations, will make a successful operator, unless the pupil is allowed to do the work *with his own hands*, under the supervision of experienced teachers. He requires, amongst other things, that delicacy of manipulation and self-confidence which are only to be acquired by practice.

Assuming that this practical inefficiency is a recognised fact, the great questions with which the profession has to deal are—*firstly, the cause*, and, *secondly, the remedy*.

With regard to the first, it is difficult to believe that the fault lies with the student; for not only has the educational standard for admission to the schools been raised, but the men who join now are certainly not socially inferior as a class to those who studied fifteen or twenty years ago. And yet, notwithstanding a much longer course of professional teaching at college, an increased staff of professors, and many other advantages, it is very generally admitted that, from a practical point of view, the former cannot compare with the latter.

It may well be asked: How do you account for this anomaly? If the student is not to blame, with whom does the fault lie? Does it rest with the teachers, the system of teaching, or with the examiners?

I have the privilege to be personally acquainted with the principals and most of the professors of our teaching schools in London and Scotland, and am convinced that their duties are performed conscientiously, and that nothing is left undone by them to educate their pupils up to such a standard of efficiency as the means and time at their disposal will allow. Blame has been attached to the teachers, and complaints made by students and others, both against them and the examiners have been numerous; but I think in the majority of instances these accusations have been made without duly analysing the question, or taking into consideration what I consider to be the principal cause of this practical inefficiency, and which will be presently alluded to.

The system of teaching has also been attacked, and it has been stated that so much time is occupied in the ordinary college curriculum, by the multiplicity of scientific subjects taught, that a proper instruction in the practical details so essential to success in after life is impossible. This statement may be true, but in any case it is rash and unwise to blame a system without thoroughly understanding the situation. None of the subjects taught can be dispensed with; on the contrary, the daily increasing importance of the profession, the rapid progress it has made during the last few years, and the position it now occupies amongst other scientific bodies, demand that the education of the student should be increased rather than diminished.

The responsibility for the practical shortcomings of the students cannot be allowed to rest with the examiners. Their duties are onerous and of the highest importance; but it is not their province to impart instruction. They are merely the judges of the pupil's efficiency, and with them rests the power to "pass" or "reject."

The examiners have been accused of undue severity in rejecting so many students at the late final examinations, but a more unjust accusation could

not have been made; for so imperfect was the practical knowledge of the candidates generally, that, had not the examiners been exceedingly lenient, the number of rejections would have been much more numerous.

I consider the principal cause of this inefficiency arises from the fact that very many students enter the various teaching schools utterly ignorant of the most ordinary details of private practice. They are sent to college fresh from home or school, without having seen so much as a dose of medicine administered, or a horse's foot examined, and are expected to compete with men who have had two or three years' sound practical instruction, at the hands of a competent veterinary surgeon, prior to commencing their college career. Such culpable negligence is both unfair to the student and unjust to the profession, and is more than likely to be productive of failure to the one, and to bring discredit upon the other. The success or otherwise of a student does not rest entirely with himself, but in a great measure with his parents. Their responsibility is very great, and if they neglect their duty, by omitting to give him the opportunity of laying the foundation of that sound practical knowledge which is so essential to success during his career as a student, and also in after life, the fault is theirs.

No young man should be allowed to enter any of our teaching schools without having served an apprenticeship of at least two years with a veterinary surgeon. It is all very well to say that the college curriculum includes clinical instruction, surgical operations, and the various details of practical work; but I contend that it is impossible for any individual student to obtain a sufficient amount of practical knowledge from the teaching given within the college walls. It is necessary that he should do the work with his own hands *over and over again;* that he should be familiar with each particular detail and with all classes of animals: and I ask, how can this be expected with crowded classes and a limited practice?

In a former part of this paper, I remarked that the school turned out better practical men twenty years ago, after a course of study of two sessions only, than they do now with an increased curriculum and other advantages. The reason, however, is obvious: in those days very few students dreamt of entering college without having previously seen practice with a veterinary surgeon, and consequently, by the aid of this elementary preparation, were enabled the more easily to grasp the subjects of their various studies.

Make a fixed term of pupilage compulsory prior to admission to college, and I venture to say that the true and only remedy will be found for practical inefficiency.

Of course we shall always have a certain percentage of failures. There are black sheep in every community, and no amount of legislation or conscientious teaching will compensate for indolence, educational deficiency, or mental incompetence.

In conclusion, I venture to offer a few words of advice to parents, and also to veterinary surgeons. To the former I would say: Place your son with some well-known and popular practitioner of good social position, where he will have the combined advantages of a good home and a large mixed practice. The premium may be somewhat high, but depend upon it you will be repaid for the outlay.

To the latter I would offer the following remarks:—

The professional success of your pupil depends, in a great measure, upon the manner in which his instruction is conducted. Give him every opportunity of seeing hospital practice, operations, examinations, etc., and when he is sufficiently advanced, let him do the work with his own hands under your supervision. Teach him to be thoroughly expert in compounding and administering medicines, but do not confine him for months to the drudgery

of the pharmacy. Many a youngster has contracted a distaste for his profession on this account. Give him a good, sound, conscientious training. Treat him at all times with consideration and patience, and combine kindness with firmness. You have other responsibilities of a moral and social nature, to which I need not refer. It is sufficient to remark that if a proper feeling is established between instructor and pupil, the work of teaching and the labour of learning will become a pleasure to both.

"A REFORMER."

SIR,—I read your editorial remarks on the above, and I quite agree with you that the present state of things loudly calls for improvement. The teaching of the schools admits of great reform, and in nothing so much as in matters of a directly practical character. Hasty knowledge is always superficial, and it is high time something were done to insist that students should have a practical knowledge of their profession before they obtain the diploma of the Royal College of Veterinary Surgeons, as many of them are lamentably ignorant, more particularly as regards the examination of horses as to soundness. The senior students ought to be compelled to examine three or four horses each week, and to write certificates of soundness or unsoundness; they would then have confidence in their opinions, and find the benefit of it when they came to practise for themselves. Knowledge can only progress with high-minded, increasing rivalry; and relying, sir, as I do, on the philanthropy and zeal which have so long characterised the professors of the various veterinary colleges, I venture to hope that they will give the matter their serious consideration, and I have no doubt that the students will derive the greatest possible benefit from being obliged to learn *the practical rudiments of their profession.*

T. D. LAMBERT, F.R.C.V.S.

Dublin, *13th Nov.*, 1884.

AN EXCULPATION.

SIR,—I trust that you will kindly allow me space for a few remarks, in answer to the accusations made against Professor Brown by "A Late London Student," in your journal for November. In the first place, the comparisons the writer makes between Professors Brown and Robertson, two men each gifted with such totally different powers of imparting their knowledge, are without question absurd. Each does his best in his own special department. In the second place, the "Late Student" complains that if students relied on Professor Brown's lectures to enable them to pass their final examination, they would probably fail. This is also absurd, for what student possessed of common sense would try to pass any examination without supplementing his attendance at lectures by careful study of standard authors. During the time I spent in Class C., Professor Brown put himself to great inconvenience to do all in his power to aid his pupils in a practical as well as in a theoretical manner. No pains were spared in procuring specimens of Foot-and-Mouth Disease, Sheep Scab, Chronic and Acute Tuberculosis, Contagious Pleuro-pneumonia (Acute, Sub-acute, and Chronic), Sporadic pneumonia, and Swine Plague, etc., etc. Could the "Late London

Student" expect Professor Brown to teach him to drench cows, pass probangs, insert trocars, and other such simple operations, which he ought to have learned during an apprenticeship? Again, what can a friend mean by giving a full list of Professor Brown's lectures? We have read it, and consider it not only sufficient, but exhaustive. And further, even if not sufficient, is not Professor Brown at liberty to add to subjects to his list, if he may think necessary? It often happens, indeed, that those from whom we may expect most turn out the most ungrateful.—I am, dear sir, yours faithfully,

Louth. JAMES BRODIE GRESSWELL.

"OUR PROFESSION AND ITS GOVERNMENT."

SIR,—At the close of the year I crave space for a few words.

I. *The Constitution and Council.*—For forty years London has been the home of the R.C.V.S. Every Council Meeting and every Annual General Meeting—save one—has been held there. Four or five hundred Southern practitioners have sat on its Council and Examining Board; of the veterinary surgeons of Scotland and Ireland, two or three dozen. A good man North can scarcely get a seat in the Council; a man no better in London is almost sure of election. A man from Scotland must be a luminary; a state of incandescence suffices for the South. The petition of the Scotch societies for better representation and government was quietly returned to them, its merits or demerits not entered on; and how any man with these facts before him can stand up and say that all is "as fair and impartial as need be," is beyond me. On the very face of the system are the marks of unfairness and wrong.

II. *Pupilage.*—Compulsory, for one, two, or three years, places a big barrier in the way of deserving students with good brains and hands, but scant funds. Many parents and guardians find College fees, board, and expenses quite enough without an additional "pupilage" burden and its premium. The pupils are 600; where the tutors? Each examiner is paid £5 a day. The profession and those who enter it pay the examiners £1,000 a year. Pupilage may surely be dispensed with.

III. *Fellowship.*—"100 F.R.C.V.S.," "1,900 M.R.C.V.S." Wherein consists the superiority of this one hundred? "Murmurs" have reached us that one Fellowship examiner retired—that some of the young Fellows who came first to the "bridge" got very easily over—that their appearance at the examining table was no credit to them—that strictly speaking they should have been rejected. May the profession be preserved from such Fellows. When the superiority of the Fellows is so evident as not to require to be made apparent, then let them be sole Councillors and Examiners—not till then. 1906 possibly, not 1886.

IV. "*Merit.*"—Thirty-six southern practitioners *on their merits* councillors and examiners, and half-a-dozen of the veterinary surgeons of Scotland and Ireland? The "best" men, the men of the greatest knowledge, skill, and integrity, almost without exception on the other side of the Border? Six-and-thirty wise and judicious men in England, half-a-dozen in Scotland and Ireland? "Merit" of this kind is a bubble that needs but to be pricked; a "pitcher that will not hold water."

V. *Impartiality.*—Instead of all being as "fair and impartial as need be," the Council chamber has almost each May presented the appearance of a chamber quarter swept and washed, into which four-and-twenty Southern men have entered, and chosen six other Southern men like themselves as Vice-Presidents; and the end of that chamber has been as the beginning.

VI. "*Progress.*"—A profession divided for forty years. A Council for forty years unable to understand or come to terms with the Highland Society. A

Veterinary Surgeons Act forty years after the granting of the Charter. Pupilage rescinded; the Examining Board being amended; Fellowship as regards Council and examinations to be re-considered. With a truly representative council at first and now, the path of progress would surely have been shorter, smoother, easier.

VII. *The Examining Board.*—In 1882 not a single veterinary surgeon in Ireland or Scotland fit for the Examining Board; twelve better men found in England! Did this Board give satisfaction? Let teachers, students, parents, and guardians answer. Why have "two more examiners been added to the horse and cattle practice tables"? Why this talk of more examiners? A mixed and rather more numerous Board—a Board of good, right men, fair specimens of English, Scottish, and Irish veterinary surgeons—is surely *the* Examining Board required by the R.C.V.S., and it would have been well, in my humble opinion, for the profession at large had Council and Examining Board been always thus constituted.

VIII. *Parliamentary Basis.*—A representative governing body should all the world over represent those whom it governs. Parliament represents the nation; the Council should represent the profession. Twenty London and Lancashire practitioners, and a few provincials, left very much to the freedom of their own will, no more, so far as I am able to judge, represent the veterinary surgeons throughout the three kingdoms, than 450 London and Manchester citizens and a few provincials, free, unpledged, and irresponsible to constituents, would represent the people of Great Britain and Ireland. The veterinary profession has long filled its Council by modes of election which the common sense and intelligence of the country would not for one moment tolerate, and in its progress (VI.) read the result. By a show of hands at a meeting in London, or by a general vote or plebiscite, a truly representative council never has, and probably never will be obtained; the only available way, to the best of my knowledge, recognised in this country, is our Parliamentary mode of election.

Parliamentary representation, or a Parliamentary election, is *not* a "returning of local representatives," *not* a "territorial arrangement," *not* a "geographical distribution," *not* a mechanical idea," *not* "sentimental *nor* absurd," *not* an election "*from* sections of the profession"; its advocates are *not* "party spirits" with tails of "murmurs and discontent."

Who cares for the nationality of our English, Scotch, and Irish Members of Parliament? But have not the people of England, Scotland, and Ireland power separately and within themselves to elect their members and representatives, and do not these members and representatives meet in the House of Commons, and is not the House of Commons the "noblest legislative assembly in the world"? The advocates of Parliamentary representation would give the veterinary surgeons of Scotland power *within themselves* to elect their representatives. They would extend the same justice to the veterinary surgeons of England and Ireland. And they would have these representatives—be they Englishmen, Scotchmen, Irishmen, or Dutchmen, no matter what so long as they are good men—meet in the council chamber; they would model the council of the R.C.V.S. after the fashion of the noblest representative assembly in the world. Show them a higher type, and they will "adopt it on the instant."

We have got our "Franchise Bill"; every M.R.C.V.S. is a voter, and we would now go in for "Redistribution." And while retaining all that is good and true and bright in London and Lancashire, we would do away with the mediocre selfish element, and fill its place with something more representative, less narrow-minded, one-sided, and superficial.

In a "minority" Scotland will always be. She has won her way in a minority. But give her veterinary surgeons Parliamentary representation,

and I would fain hope they will send eight or nine men to Council before whose faces such vagaries as "A Southern Examining Board," "Pupilage," "Farcial Fellowship," and even the "Docking of Horses" shall flee away.

IX. *The National Veterinary Medical Association* "follows the lines of the British Medical Association."—That society, if I mistake not, has been in Edinburgh—it or some such association visited Canada this year. Might it not be well for the National Society to visit Edinburgh next year, and ascertain whether as good a meeting may not be had in Scotland as elsewhere? Dublin should not be forgotten; and even a rubbing of noses and brains with Yankee confrères might be productive of great mutual benefit. To those with time and means a very pleasant summer trip. A national society should not always go where it will be "best supported," but where it will do national good.

X. *Scottish Amalgamated Society.*—The idea was broached by Mr. Rutherford one evening, and the places of meeting soon fixed; without a thought, save the improvement and the promotion of good fellowship among the members of the three societies. That this society has done good and been fairly successful is simply owing to the fact that it supplies a want much felt. In this society the R.C.V.S. and N.V.M.A. may find a means of making new and warm friends, and in it also the veterinary surgeons of Scotland may find, if they choose, a power and a way of making their voice heard.

XI. *Deductions.*—The work of the Secretary of the R.C.V.S. is "great and ever-increasing." Lessen it, appoint a small subsection of the Council, or a provisional committee in Edinburgh or Glasgow for the transaction of minor Scotch business. Save 2,000 circulars and stamps each May, and the labour of issuing, collecting, and scrutinising them; adopt Parliamentary representation, or some better plan; save money; save time; get a better result; secure a truly representative council; make Council and Examining Board representative of the veterinary surgeons of the country; let the R.C.V.S. and the N.V.M.A. go occasionally to a few of the larger cities, doing good and making friends.

The Royal College of Veterinary Surgeons should surely be a grand national institution, embracing in its fold all veterinary surgeons, and every veterinary surgeon, in the three kingdoms, worthy of the name; regarding them all, wherever placed, with equal favour. Not choosing its councillors and examiners from one particular country or city, but looking abroad and around with an impartial eye, and choosing the best men—the most truly representative men—the men of the greatest ability, integrity, and sound judgment. Not locating itself in one favoured city or town, but moving about occasionally at least; giving light, life, strength, and encouragement to all parts, and especially the weaker parts of the profession. The duty of the veterinary surgeons of the present day is surely not to follow too blindly a Charter framed forty years ago, but to enlarge the border, and strengthen the stakes, and make the R.C.V.S. a broader, a stronger, and a nobler institution.

That this disjointed epistle may, with the others before it, be but a slight means to this end, is the sincere wish of, sir,

Yours very truly,

Slateford, 17*th November*, 1884. C. CUNNINGHAM.

THE PATHOLOGY OF "BURSATTI."

SIR,—Mr. Smith, in the July number of the VETERINARY JOURNAL, has been at pains to instruct the profession on how diseased tissues should be hardened and prepared for examination under the microscope; and as I have spent considerable time over this subject, I beg to make a few observations on his conclusions.

The fungi, which were first described as diagnostic by Mr. F. F. Collins, late Inspecting Veterinary Surgeon, Bengal Army, have, as most of your readers are aware, since been a good deal dilated upon; but the outcome of the whole question is that little that is practical, or at all supportable on facts of plain experience, is as yet forthcoming in regard to this subject; and we are left as far as ever we were removed from an understanding of all those many features which surround the clinical history of Bursatti, and which still require explanation.

Mr. Smith writes that sores should not be examined after hardening in chromic acid, as parasites seldom exist then. My own experience is that the parasites abound, and are present in greatest numbers in those tissues (Bursatti as well as other morbid specimens, as, for example, pieces of liver that has undergone fatty change) which have been so hardened. And reference to the literature of this subject of parasitic development in many diseased tissues shows me that I am not alone responsible for such an opinion. It should be stated that Drs. Lewis and D. D. Cunningham—who, at the special request of the Government of India, made a most thorough investigation into the nature, causes, and pathology of "Oriental Sore," or *Lupus Endemicus*, in 1876—pointed out that "tissues which have been preserved in solutions of chromate of potash, or chromic acid, are very apt to become the sites of growth of fungi." In corroboration of their views Drs. Lewis and Cunningham stated that "one of the specimens of *healthy* skin which we preserved in chromic acid during our stay at Delhi, was a few weeks subsequently found to be covered with a thick layer of mould, as well as the fluid itself, which, having partially evaporated, had allowed the fragment of skin to project somewhat beyond the surface." (Vide Report on the "Oriental Sore," as observed in India, by Drs. Lewis and D. D. Cunningham, Special Assistants to the Sanitary Commissioner with the Government of India, 1876.)—I remain, sir, yours very obediently,

R. W. BURKE, A.V.D.

Cawnpore, *17th October*, 1884.

MEDICINE AND ADVICE.

DEAR SIR,—Will you kindly answer the following question through the "Correspondence" page of the VETERINARY JOURNAL? Do you think it would be derogatory to the profession for a *respected* M.R.C.V.S. to issue a small pamphlet giving a *few* practical directions to stock-keepers in isolated localities in his own district, at the same time recommending a few of his own special medicines? The influx of quack remedies renders it almost a matter of necessity.—Yours respectfully,

J. C.

[We do not see anything unprofessional in a veterinary surgeon furnishing his clients with advice as to the use of the medicines he may give for the use of their stock. That would not be a case of teaching every farmer to be his own veterinary surgeon.—ED. *V. J.*]

AN EXPLANATION REQUIRED.

SIR,—I take the liberty of sending the enclosed cutting from the *Dundee Advertiser*, for which you may find room in your next issue, and would like to know if Mr. Spreull was correct in stating that there was an *aneurism* of the posterior vena cava. It is contrary to the teaching I have received; but as Mr. Spreull is a Fellow of the R.C.V.S. and an ex-examiner for the Highland and Agricultural Society, he may have been quite correct. Perhaps some of your readers will relieve the mind of an inquiring "STUDENT."

"*Important Decision as to the Warranty of a Cow.*

"On 25th March last, Mr. James Kydd, cow-feeder, Broughty Ferry, purchased at Messrs. Dodds and Bathie's auction mart, Dundee, a cow which was warranted by the seller, Mr. William Liddell, Denny, to be 'all correct and sound.' The cow was taken delivery of by Mr. Kydd, but died in his possession fifteen days after the day of sale, from the results of a cold. A *post-mortem* examination showed that the animal had been suffering from internal complaints previous to the sale, and Mr. Kydd brought an action against Mr. Liddell for repayment of the price, which he had settled, less the net proceeds of the carcase of the animal, on the ground that it was unsound at the date of sale. A proof was lately led in the case, and the parties' agents heard. Sheriff Cheyne has now issued the following interlocutor sustaining the pursuer's contentions :—

"'Dundee, 8th September, 1884.—The Sheriff-Substitute having advised the process, finds that at a public sale held in the Cattle Market, Dundee, on 25th March last, the pursuer purchased a milch cow belonging to the defender, at the price (which was duly paid by bill) of £20 5s., and on a warranty that she was all correct and sound: Finds that the said cow was taken direct by the pursuer straight from the market to his byre in Broughty Ferry, and that she died there on 9th April: Finds that during the fifteen days that she was in the pursuer's possession the cow was dull and off her food, and did not give much milk; but the pursuer, not unreasonably, attributed these symptoms to the fact that she had recently calved, and, till within a few hours of the death, did not apprehend any danger or see any cause to call in professional assistance: Finds that, in the opinion of Mr. Spreull, a veterinary surgeon of experience, who made a *post-mortem* examination of the carcase, on behalf of the defender, and who is the only witness upon the point, the death "arose from the effects of exposure to cold in transit, by rail or otherwise, setting up irritation of the bronchial tubes, congestion of the lungs, and emphysema of the interlobular tissue;" but the *post-mortem* examination also revealed the fact that the animal was suffering from an aneurism on the posterior vena cava just as it passes through the liver, which aneurism, Mr. Spreull says, must have existed for several months, at all events might at any moment have proved fatal, and though probably not the direct inducing cause of the acute disease of which the animal died, would have the effect of debilitating the system, and so predisposing the animal to take cold and preventing its throwing a cold off: Finds, as a consequence of the preceding finding, that the cow was unsound at the time she was bought by the pursuer, and that, there being thus a breach of warranty, the pursuer is entitled to repetition of the price and costs (3d.) of bill-stamp, under deduction of the net proceeds received by him for the carcase, which amount to £5 13s. 6d.; and having regard to these findings, decerns against the defender for the sum sued for, with interest, as craved: Finds the pursuer entitled to expenses, allows an account of these to be given in, and remits the same, when lodged, to the auditor of court to tax and report. (Signed) 'JOHN CHEYNE.'

"'*Note.*—That the defender gave the warranty in entire good faith, and in the full belief that the cow was sound, I do not for one moment doubt; but it is conclusively shown by Mr. Spreull's evidence that, in point of fact, the

cow was at the date of the sale labouring under a chronic disease which constituted it unsound; and, though in Mr. Spreull's opinion that chronic disease was not the direct cause of that acute malady which actually caused death, it undoubtedly rendered the animal less able to resist the acute malady; and that being so, it humbly appears to me that the defender must answer as for breach of warranty. The case of Brown *v.* Boreland, 29th June, 1848, 10 D., 1,460, referred to at the discussion, is very much in point. Of course, if it had been shown that the pursuer treated the cow in such a way as would have occasioned its death had it been healthy, there might have been room for refusing him repetition of the price; but nothing of the kind has been shown. It is certainly possible that if a veterinary surgeon had been at once called in by the pursuer, and active treatment administered, the cow's life might have been prolonged; but, having got a warranty of soundness with her, and having done nothing to her beyond driving her from Dundee to Broughty Ferry, the pursuer cannot, I think, be blamed for attributing, as he says he did, her dulness and the other symptoms which she exhibited to the fact that she had recently calved. As regards expenses, I have had some doubts whether I ought not to have allowed the pursuer only those expenses which he would have incurred had he brought the action in the Debts Recovery Court, in which court, I am inclined, having regard to recent decisions, to think it might competently have been brought; but the point is certainly not free from doubt, and that being so, I have come to the conclusion that I ought to make the ordinary finding. (Itd.) 'J. C.'

"Agent for pursuer—C. C. Duncan: for defender—W. E. R. Young."

TO CORRESPONDENTS.

Communications from Messrs. Dawson, Harrison, Cox, Nettelton, and several meetings of societies reports, as well as correspondence, are unavoidably held over until next month, in consequence of the large demand made upon our space by the introductory lectures of schools.

Communications, Books, Journals, etc., Received.

COMMUNICATIONS have been received from R. W. Burke, A.V.D., Cawnpore; G. A. Banham, Cambridge; P. S. Abraham, Dublin; Arnold and Sons, London; R. A. N. Powys, London; "J. C."; A. Osler, Philadelphia; J. B. Gresswell, Louth; "Student"; J. Macqueen, Glasgow; T. Greaves, Manchester; J. Harrison, Burtergill; W. G. R. A. Cox, Newcastle-on-Tyne; Professor McCall, Glasgow; "Peripatetic"; C. Cunningham, Slateford; J. Nettelton, Northallerton; W. Penhale, Plymouth; J. B. Wolstenholme, Manchester; R. J. Dawson, Tunstall, Suffolk; T. D. Lambert, Dublin; "A Reformer."

BOOKS AND PAMPHLETS: *C. Walford*, A Statistical Chronology of Plagues and Pestilences as affecting Human Life; *O. Siedamgrotzky* and *V. Hofmeister*, Anleitung zur Mikroskopischen und Chemischen Diagnostik der Krankheiten der Hausthiere; Procès-Verbal de la Société Vétérinaire d'Alsace-Lorraine.

JOURNALS, ETC.: *Journal of the Royal Agricultural Society of England; Live Stock Journal; Mark Lane Express; British Medical Journal; Lancet; Quarterly Journal of Veterinary Science; Revue Vétérinaire; L'Écho Vétérinaire; Edinburgh Medical Journal; Journal of Comparative Medicine and Surgery; Recueil de Médecine Vétérinaire; Der Thierarzt; Repertorium für Thierheilkunde; American Veterinary Review; Archives Vétérinaire; Archiv für Wissenschaftliche und Praktische Thierheilkunde; Œsterreichische Vierteljahresschrift für Wissenschaftliche Veterinärkunde; Der Hufschmied; Tidskrift för Veterinar-Medicin och Husdjursskotsel; Chicago Live Stock Journal; Annales de Médecine Vétérinaire; Clinica Veterinaria; Animal World; Tidskrift für Veterinar-Medicin.*

NEWSPAPERS: *The Bradford Observer; Lahore Civil and Military Gazette; Times; Montreal Gazette; Globe.*

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